Monthly Labor Review

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Survivors' Benefits for Fatal Work Injuries

Skill Improvement Training in Two Craft Unions

Technology and Productivity in Bituminous Coal Mines

Multiple Jobholding in Late 1960

UNITED STATES DEPARTMENT OF LABOR

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Monthly Labor Review

UNITED STATES DEPARTMENT OF LABOR • BUREAU OF LABOR STATISTICS

LAWRENCE R. KLEIN, *Editor-in-Chief*
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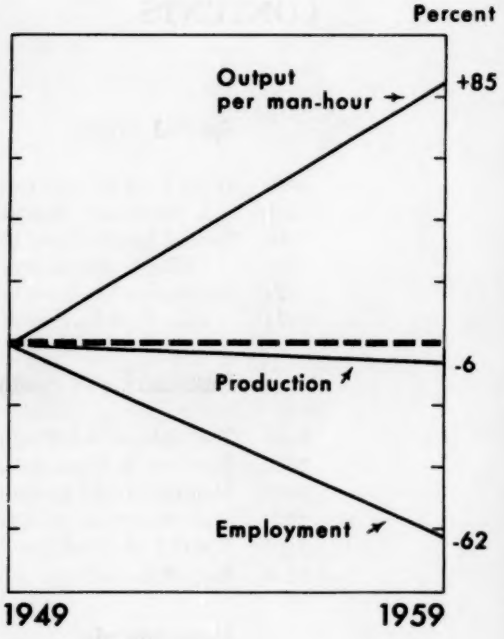
The bituminous coal industry . . .

. . . greatly increased its productivity between 1949 and 1959. At the same time, production fell and employment declined sharply.



Output and employment are for production workers.

The article, Technology and Productivity in Bituminous Coal, 1949–59, which appears on pp. 1081–1085 of this issue, discusses these and related trends in the industry's wages, technology, prices, and profits.

The Labor Month in Review

THE COMPANYWIDE STRIKE at the Ford Motor Co., called by the United Auto Workers on October 3, was settled by a national agreement reached on October 11, and the union instructed those locals who had achieved local agreements to return to work. Economic issues between the parties had been for the most part decided prior to the strike deadline, but disagreements over production schedules, skilled job classifications, the number of union representatives in each plant, the higher wage rate in the Ford steel plant than in the basic steel industry, and contracting out of work were not settled until October 11. The terms of the settlement had not been announced at press time. In the wage and benefit field, the agreement closely followed the General Motors settlement of September 7, slightly exceeding it, according to the UAW, in regard to insurance, hospitalization, and supplemental unemployment benefits. GM employees, most of whom had struck over local issues following the national economic settlement, were back at work by September 27, after the contract was finally signed.

In the farm equipment industry, a 3-year contract between Deere & Co., and the UAW was the first of the season. Effective on October 1, it was similar in wages and benefits to the auto pattern.

Meanwhile, Allis–Chalmers Manufacturing Co. announced pay cuts of 5 percent for salaried employees earning less than $10,000 a year and from 10 to 25 percent for those in higher pay brackets until "extensive cost and expense reducing activities . . . take their salutary effect." The UAW local representing production workers at the Allis–Chalmers Milwaukee plant immediately started an organizing drive among the 6,000 white-collar workers there. However, the UAW lost, by 98 to 79, a vote taken among salaried workers at the Allis–Chalmers Pittsburgh plant 2 days after the pay cut was announced. The national UAW–Allis Chalmers contract covering production workers is due to expire November 1.

Provisions for minimizing the effects of job reductions caused by technological advances continued to be prominent in bargaining in the meat-packing industry. By mid-September, Swift & Co. had agreed with the United Packinghouse Workers and the Amalgamated Meat Cutters upon 3-year contracts which permit a worker to apply for transfer to any job in another plant for which he qualifies. The agreements provided for 90 days' notice of plant closings; those who transfer will receive moving costs up to $500, and those laid off will get increased separation pay, and extended health insurance. General wage increases amounted to 19 cents an hour in most plants.

Armour and Co.'s settlements with the two meat-packing unions, which also included 19-cents-an-hour general wage increases, featured "technological adjustment pay." The 3-year contracts, signed on September 10, require the company to give 3 months' notice of intent to shut down a department or a plant. During this time, all employees will receive full pay. Following this, employees with at least 5 years' service will be eligible for technological adjustment pay while seeking a transfer. Other employees may elect severance pay or earlier retirement. TAP benefits of $65 a week (less unemployment compensation and wages earned elsewhere) run from 26 weeks for those with 5 years of service to 39 weeks for those with 25.

Bargaining between the Pacific Maritime Association and the Masters, Mates and Pilots union, which also involved the issue of more men than jobs, was not as peacefully resolved. The ship officers struck at the end of September after the expiration of a Taft-Hartley injuction that had originally affected the MMP and several other maritime unions on all coasts. They returned to work 2 weeks later, after a 3-year contract was agreed upon. The union's demand for spreading the work resulted in provisions for increasing vacations from 70 to 90 days, hiring of relief crews from union halls, and granting 5 days' vacation to casual workers. The parties agreed to negotiate further on such items as pension plan revisions and establishment of a mechanization fund. No details on a wage settlement had been announced at press time.

Along with a 7-cent-an-hour deferred increase and further increments in job rates, effective October 1, about 580,000 workers in steel and related

industries received a 1½-cent-an-hour cost-of-living increase. Under the steel industry's 1960 contracts, the potential cost-of-living raise was 3 cents an hour. However, United States Steel (whose experience is the measuring stick for this purpose) and the Steelworkers agreed that half of the increase must be applied to projected increases in insurance costs, according to the terms of this contract.

ACTING UPON A PETITION for reconsideration by the UAW, the National Labor Relations Board reversed its February 1961 decision in an agency shop case involving nine General Motors plants in Indiana, a right-to-work State. On September 29, the Board held that an agency shop agreement is a permissible form of union security within the meaning of the Taft-Hartley Act and is a mandatory bargaining issue.

The U.S. Supreme Court ruled on another aspect of the union security controversy when it refused on October 9 to review a Kansas Supreme Court decision that agency shops are illegal under that State's right-to-work law. The case was *Teamsters* v. *Higgins*.

A bill extending for 2 years the law regulating the recruitment of farm workers from Mexico was signed by President Kennedy on October 4. Mr. Kennedy said he signed the bill, despite its failure to provide adequate safeguards for the wages and working conditions of domestic farm workers, because some Mexicans would still be needed next year and because of the impact in Mexico if they were deprived of this much needed employment.

Procedures for nominating and electing international officers found in the Steelworkers' constitution were held "lacking and deficient in failing to set forth nominating procedures for its international officers" and thus inadequate to protect members' rights under the Landrum-Griffin Act of 1959, according to a Federal district court judge in Pittsburgh on October 11. He said the constitution doesn't provide for nominations by secret ballot nor a method whereby all members can participate in the nomination of district directors.

On September 18, Secretary of Labor Arthur J. Goldberg announced the appointment of W. Willard Wirtz, Under Secretary of Labor, Edward Gudeman, Under Secretary of Commerce, and Donald Strauss, labor arbitrator, to a board to consider the foreign flag issue raised in the recent maritime dispute. The board, with Mr. Wirtz as chairman, was established pursuant to labor-management agreements providing for the referral of the dispute to such a board.

AS THE AFL–CIO Executive Council opened its meeting in New York at the beginning of the second week in October, it considered the alternatives of readmitting the Teamsters to the Federation, chartering a new union to organize teamsters, or an intermediate position. By a 24-to-2 vote, the members voted to empower AFL–CIO President George Meany to issue federal union charters "to local groups who leave the Teamsters and indicate a desire to join the ranks of the AFL–CIO." Mr. Meany drew a parallel between this action and Teamster President James R. Hoffa's announcement last July that he would organize and issue charters to any local that was dissatisfied with its affiliation.

Several days before the Executive Council meeting, the Transport Workers Union convention passed a resolution calling for readmission of the Teamsters to the AFL–CIO and had heard Teamster President James R. Hoffa speak about the accomplishments of his union.

AFL–CIO officials sharply reproached the National Association of Manufacturers for announcing in late September that they would no longer participate in the International Labor Organization. Responding to the NAM's charge that the ILO is leftist dominated, Mr. Meany said that not only is the charge unwarranted and that "last year's ILO session . . . dealt the Communists a series of decisive defeats," but that employers and unions must "stand firm against totalitarianism in such world forums as the ILO." He said he was glad to note that the Chamber of Commerce would continue its role in the UN agency.

A Federal grand jury in Orlando, Fla., indicted Teamster President James R. Hoffa on October 11, on charges that included using the mails to defraud. The indictment, which was similar to the one that on July 12 was found invalid on grounds that the jury had not been chosen properly, charged misuse of more than $500,000 of union funds for promotion of the Sun Valley real estate development in Florida.

Work Injuries and Recovery

EDITOR'S NOTE. *The following article is the first of two by Earl F. Cheit, associate professor of business administration at the University of California. The second will appear in the November issue and deal with the problem of permanent disabilities. Both articles consist of excerpts from his book,* Injury and Recovery in the Course of Employment, *scheduled for publication in November by John Wiley & Sons. Dealing with survivors' benefits, the first selection consists of the concluding portions of chapter 5; earlier sections of the chapter contain statistical support for the conclusions. Footnotes have been renumbered and minor word changes have been made to cover elisions in the text and to shorten headings.*

I. Survivors' Benefits— A Plan to Make Them Equitable

Various Criteria of Economic Security

It is clear, as already noted, that the economic security of unmarried widows compares poorly with that of those who have remarried: their preaccident incomes were smaller, they are older, and they have smaller postaccident incomes.

The analysis shows that in this group there is also a considerable range of experience. Each of the economic measures identifies a group of widows whose income seems extremely low; a considerable number of widows rate their own economic situation as grave; the interviewers select an even larger group whose benefits are inadequate. Their evaluation is confirmed by the fact that in one-third of the cases, widows had to seek employment immediately following the accident in order to assure family support.

But further analysis is necessary, for although the measures discussed above reveal that hardship exists among the widows who have not remarried, we find that the different criteria of hardship are present not in the same, but in different cases.

For example, if we compare the results of the 11 measures used in the survey to gain information about the widows' postaccident financial security, we find there is a rather low degree of overlap between them. The 11 criteria, already discussed above, identify cases in which: (1) widows report postaccident financial difficuties; (2) workmen's compensation payments to the family were inadequate in the opinion of the interviewers; (3) sixth-year income is less than 40 percent of income received by the family the year prior to the accident; (4) children were forced to drop out of high school or college as a result of the accident; (5) children had to enter the labor force and support the family as a result of the accident; (6) housing status was adversely affected; (7) families received public assistance payments during fifth to sixth years following the fatal accident; (8) the estimated losses due to the death were low—indicating husband's low income and/or fewer years of working life expectancy at time of death; (9) total death-related benefits restore less than one-fifth of losses; (10) death benefits, allocated annually over the deceased's working life expectancy, amount to less than 11 percent per year of the total family income the year prior to the accident; and finally, (11) the widow entered the full-time labor force after the accident.

A classification of the cases in each category shows that, of the 122 widows in the 1952 sample who did not remarry, 40 reported postaccident

financial difficulties. Thirty-six of these 40 cases were also judged by the interviewers to need additional compensation benefits. But the interviewers classified an additional 35 cases as needing further benefits.

To continue the example, of these 71 widows who, in the interviewers' opinion, needed more workmen's compensation benefits, only 20 had sixth-year incomes amounting to less than 41 percent of their income the year prior to the accident.

Reasons for Limited Overlap

These examples of limited overlap of the cases identified by the various criteria are characteristic. No single criterion or combination of criteria seems to select the hardship cases. Why? First, some of the criteria are not comparable. Thus, although 40 widows reported having postaccident financial difficulties, there are only 9 who reported that their children entered the labor force as a result of the accident. The analysis showed that many of these 40 had no children, or had children who were too young to go to work. Second, even among widows with children, the impact of financial difficulties may vary from person to person, such that a widow might be in serious financial difficulties, yet manage to keep her children in school. Moreover, another might not view it as serious if her children did enter the labor force.

In addition to these noncomparable samples and differences in interpretation of standards, the widows found different solutions to their problems, were differently affected by the death of their husbands, and thus are represented in some but not each of the categories. For example, many widows who went to work full time after the accident did not report financial difficulty. Of the 40 who did, only 16 were in the group of 52 who went to work following the accident. Thus, the widow, in finding her own economic solution, did not consider herself in financial difficulty, even though she had to go to work. The very standard used, therefore, became less meaningful when used in comparison with others.

Determinants of Economic Success or Failure

What can be concluded about the measures and variables that seem to determine success or failure of a widow in gaining a reasonable measure of postaccident economic security? Leaving aside remarriage and those few cases in which family resources are large enough to prevent an economic problem, the income necessary to guarantee a widow's postaccident economic security must come either from: (1) her death benefits; or (2) her ability or that of members of her family to find remunerative employment.

Social Security Payments. Earlier analysis showed social security payments to be the most important death-related benefit.[1] For those receiving them, Old-Age, Survivors', and Disability Insurance payments restored almost twice as large a proportion of loss in the median case as did workmen's compensation death benefits. Their importance to the economic security of widows is obvious.

Who receives social security benefits? Almost all the widows with minor children, and those past retirement age. Fifty-five of the 168 cases, or 32.7 percent of the 1952 widows, did not get social security. Except for a few cases (eight) of workers in uncovered employment or those who had not established coverage (as, for example, the case noted earlier), these widows without social security are primarily women who have not yet reached 62, and who have no minor children.

Their median age is 48.3; by contrast, the median for the whole sample is 40.1; for widows who have not remarried, it is 45.7; for those who remarried, it is 33.

Thus it is clear that those women without minor children who have not yet reached 62 (25.6 percent of the cases) will have considerably lower death-related benefits since they receive no social security.

Effects of Age Differences. Widows in this age group not only receive lower death-related benefits, they also have lower income from other sources. The table, for example, shows age at the time of accident for those 37 widows who have not remarried, whose total sixth-year income is 40 percent or less of their income the year prior to the accident.

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[1] Furthermore, social security coverage and benefits are increasing. In 1960, for example, Congress raised each child's benefit to three-quarters of the worker's primary benefit instead of the former allotment—one-half plus an extra quarter distributed among the children. Thus, payments will not be reduced as drastically when each child reaches 18.

In addition, there are substantial new (July 1, 1960) benefits available for survivors of all veterans of World War II and the Korean war regardless of the cause of death, where need can be demonstrated.

AGE OF WIDOWS (NOT REMARRIED) WHOSE SIXTH-YEAR INCOME IS UNDER 41 PERCENT OF INCOME YEAR PRIOR TO ACCIDENT

[1952 sample]

Age at time of husband's fatal accident	Percentage of cases ($N=37$)
Under 25	0
25–29	2.7
30–34	2.7
35–39	10.8
40–44	10.8
45–49	16.2
50–54	18.9
55–59	24.3
60–64	2.7
65 and over	10.8
Median age at time of accident	51.8

SOURCE: California Survey Sample. See appendix II.

This measure of sixth-year income as a percentage of preaccident income seems to be the best single indicator of a widow's economic well-being. Cases in which it is 40 percent or less have a median age of 51.8 compared with a median age for the entire sample of 40.1; for those who have not remarried, it is 45.7.

The data on income when viewed in another way indicate that low sixth-year income is also associated with low social security and workmen's compensation payments. When workmen's compensation and projected social security payments are combined, 75 percent (92 cases) of the widows who have not remarried received less than $27,600. Of these widows, 54 percent had sixth-year incomes of less than $2,800.

Age and Adaptability. Aside from the fact that social security is a major factor, there are other reasons for this result. Widows whose children are grown also seem to have a more difficult time finding employment. Partly, this reflects the effects of age on adaptability; partly, the interviewers felt that the traumatic effects of the accident struck this group of widows harder; they were not able to recover as easily as the younger widows.

Age and Employment. It will be recalled that the median age of all widows who have not remarried was just under 46; of those nonremarried widows who have worked since the accident, it is 43; but of those who do not go to work, it is 47. It appears that on the whole, then, only the younger of these widows are able to solve their economic security problems through entering the labor force.

What makes this situation of no (or delayed) social security, and smaller work and remarriage opportunity, especially damaging is that this group of older widows seems also to have had less economic security at the time of the accident. The whole group of widows who have not remarried came from families with smaller incomes than the younger, remarried group. The estimated losses of this older group are deceptively low, but this is a function of an older husband and a smaller income. The median age of those with lowest losses (under $37,501) was 56.

Thus it is not surprising that when all the widows were asked to evaluate their own economic security ("how have you been getting along since the accident?"), the older widows place themselves in the least secure groups. The median age of those widows who said that they were having difficulties is slightly over 48.

The Ten "Worst" Cases

An analysis of the 10 "worst" cases confirms the general observations that have been emerging from this analysis of the data. The 10 cases in which the widows reported greatest difficulties—"don't know if we'll make it"—had a median age of 50; none were under 40.

Five of them had minor dependents, all over 14, and in these five families, four children went to work because of the accident. Five of the cases received no social security benefits; seven had no life insurance; only one received over $4,000 in insurance.

The Emerging Picture

The widows who remarry have virtually no problem in economic security not only because of the added income of their second husbands, but also because, being younger, they have other advantages. As a group, the younger widows, as we have seen, are more able to recover from the psychological trauma of the accident, can find work more easily, are more likely to remarry, and in most cases are entitled to social security benefits which are far more important to their economic security than workmen's compensation benefits. In sum, the younger widows have better resources—financial, physical, and psychological.

By contrast, the widows well into their forties or older at the time of the accident, with no minor dependent children or with children about to reach majority, are least likely to remarry, least able to

find work, have little or no social security benefits until reaching retirement age, and are hit hardest by the pyschological trauma of the accident and its aftermath. By any standard, these widows are most in need of better benefit treatment.

One thing must not be forgotten: these findings are descriptive of the variables that seem to determine group or average experience. In each group there are exceptions: young widows who do not remarry, who cannot work, whose benefits are not large relative to their needs, and who do indeed suffer economic hardship; just as there are older widows whose economic recovery is quick and complete.

Death benefits, as we have already seen, are (more than any other compensation benefit) related to need. Given the benefits under the social security system, the picture of need that emerges from an analysis of cases is somewhat different from the one traditionally associated with survivorship. Need seems now to be primarily a function of age and social security benefits (which are also partly determined by age).

The economic needs of younger widows, while on the average greater than those of older widows because of their greater number of dependent children and their longer life expectancy, are also better met by death-related payments in addition to workmen's compensation.

Though their initial need is less apparent, the older widows are nonetheless in a poorer economic position 6 years following the occupational death of their husbands, for the reasons already noted.

In the final analysis, therefore, age and presence or absence of social security benefits appear to be the most important variables in determining the success or failure of widows in achieving an essential degree of economic security.

Needed Changes in Benefit Policy

What benefit policy is best under these circumstances? Historically it has always been contended that adequate protection for survivors can be assured only by a lifetime widow's benefit (terminated by death or remarriage). Yet only nine State laws and the District of Columbia offer these annuities.[2] Why?

The obvious and growing importance of OASDI survivorship benefits has not been lost on State legislators. Their reluctance, particularly in recent years, to provide annuities under workmen's compensation reflects the fact that OASDI has grown steadily and is now a major factor in the economic outlook of most families. Reported instances of combined OASDI and workmen's compensation benefits which exceed lost wages are no longer rare.

The problem facing workmen's compensation, therefore, is not whether its benefit policies should take account of OASDI. They already do, and will probably continue to do so in ever greater degree. The danger is that the need for coordinating the two systems of survivorship benefits will not be faced frankly: that for fear of their State systems being consumed by the Federal program, State compensation lawmakers will officially ignore OASDI, while at the same time they refuse to provide compensation annuity benefits because of it.

It had already become obvious—even before these confirming data from the California survey—that permitting the two systems to continue side by side without coordination created serious inequities. Some cases have overlapping benefits that restore more than wage losses; over a third are not covered by social security at all. When these widows face economic hardship it is particularly unfair, because their limited compensation death benefits are in part due to the existence of OASDI benefits, which unfortunately they did not get.

These problems have begun to stir criticisms and both the problems and the criticisms will grow. A patchwork or piecemeal approach to the problem will not suffice. What is needed is a coordinated program that (1) provides compensation benefits that achieve the desired objectives of a work-related death payment; (2) fills in existing gaps to assure adequate protection while controlling overlapping benefits and therefore excessive payment; and (3) is administratively feasible.

Such a program of benefit coordination must start from the obvious premise that OASDI survivorship benefits will constitute the Nation's basic social insurance program for premature death and will seek to fill the primary economic needs of covered survivors. Its coverage gaps will be reduced, perhaps eventually eliminated.

To this must be added the second premise that even if all coverage gaps in OASDI benefits are

[2] Five of these date back to the original legislation.

eliminated, there are important policy considerations for maintaining a distinct workmen's compensation death benefit.

This is true despite the fact that there may appear to be a certain social inequity in guaranteeing a higher lifetime income for the survivor of an individual whose death was the result of an occupational rather than a nonoccupational cause.

The question has been argued many times, particularly in European juridictions when integrated social insurance systems were being established as a matter of policy. The European experience provides strong precedent for singling out the occupationally disabled for special treatment—even where a single social insurance system exists.

In his famous report on social insurance, Sir William Beveridge concluded that: "On balance, the reasons for distinguishing between accident and industrial disease in any employment and other causes of injury, at least where death occurs or disability is prolonged, outweigh the reasons on the other side in favour of complete uniformity."[3]

Four considerations support the case for special occupational death benefits: (1) they are desirable assurances which help fully to compensate work in hazardous employments;[4] (2) they provide economic incentives for higher safety standards; (3) they constitute payment for a special claim since work-caused fatalities occur while employees are acting under orders of their employers; (4) they offer the only justification for limiting liability under common law.

While all of these arguments are important, in Beveridge's view, the first—that special work related death benefits should be paid as "danger money"—is strong enough so that, in the words of the report, it ". . . standing alone would justify provision of compensation on special terms in occupations with more than an average risk of accident or disease. . . ." To seek to distinguish disability provisions by occupation would multiply distinctions and create administrative problems. The Beveridge report proposed therefore: ". . . that provision for industrial accident and disease in a unified Plan for Social Security can, and should be, combined with the advantages of making discriminating provisions for the results of industrial accident and disease where these lead to death or prolonged disability."[5]

So although the social security and workmen's compensation benefits for survivors are two different programs, with different benefits being paid for different reasons, the equally pressing demands of adequacy and equity for survivors cannot be met unless the two programs are coordinated.

Alternative Methods

The first question which arises in any attempt at benefit coordination is: should social security be offset by workmen's compensation or should it be the other way around? The latter seems the preferable alternative. Consider one proposal which has arisen in this context: it would permit survivors entitled to both benefits to receive full compensation but would reduce the OASDI payment by the amount of the employer's contribution to the program. While this would deal with the problems of gap and overlap, it raises serious objections. It contradicts the premise, basic to the social security system, that its benefits are payable as a matter of right.

Moreover, its administrative problems seem greater than its advantages. A worker might have had a dozen, or in some occupations several dozen employers over his working life. If the purpose of this proposal is to relieve employers of the burden of paying under two systems, the job of parceling out individual employer credits would be more costly than it would be worth. In fact, the employer himself may have gone out of business.

The alternative approach—that of offsetting workmen's compensation in part by social security benefits—does not create these difficulties. The Minnesota law has already accumulated experience with this method in its provision for permanent total disability benefits. The Minnesota statute provides: "This compensation shall be paid during the permanent total disability of the injured person but if the employee is eligible for old-age and survivors' insurance benefits, such benefits shall be credited on the compensation benefits payable under this subdivision after a total of $18,000 has been paid."[6]

What magnitude of cost would be involved in a coordinated death benefit program following an

[3] Sir William Beveridge, *Social Insurance and Allied Services* (New York: Macmillan, 1942), pp. 39–40.

[4] See the argument in John G. Turnbull, C. Arthur Williams, Jr., and Earl F. Cheit, *Economic and Social Security* (New York: Ronald Press, 1957), pp. 255–258.

[5] Beveridge, loc. cit.

[6] Minn. Stats. (1957), sec. 176.101, par. 47.

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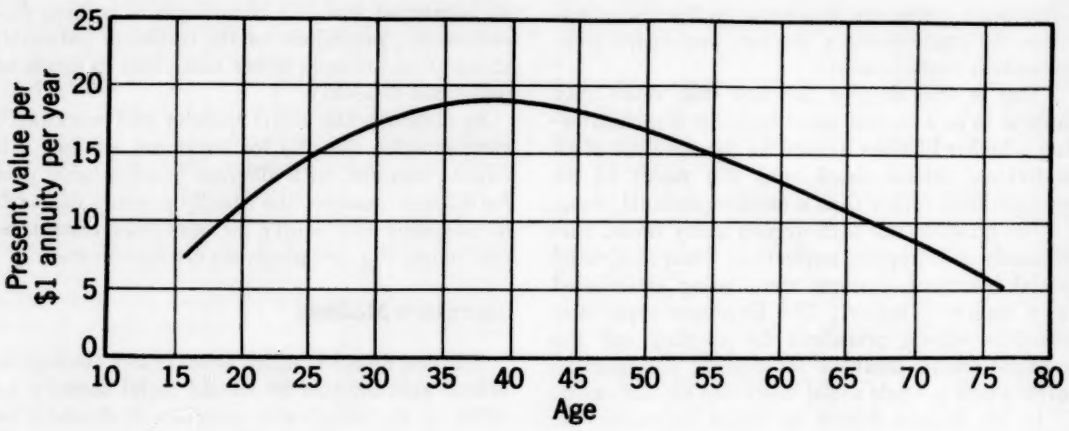

offset approach, such as that used in the Minnesota law?

Estimated Costs

Let us consider first the cost of a straight workmen's compensation annuity. For purposes of illustration recall the "representative" case discussed in chapter 4, of the widow age 41 with children 10 and 6, and assume an annuity (terminated by death or remarriage) which pays two-thirds of the average wage earned by fatally injured workers in California. This produces a figure of $3,826 per year, or $318.83 per month.[7] Cost of such an annuity may be determined by reference to the data in the chart.

Based on published life and remarriage tables, the chart shows the present value per dollar per year of a dollar of benefits paid to a widow until death or remarriage. Values are discounted by 2½ percent. For example, at age 20, the discounted cost per dollar per year is less than $12, reflecting the high remarriage rate among young widows. The annual cost climbs rather sharply until the peak of 38, when the annual cost per dollar has a present value of about $18. The curve then declines steadily, reflecting now the increased death rate. Because the remarriage rate declines more slowly than the death rate increases, the rate of decline after age 38 is more gradual than the increase before 38.

By reference to the chart, we can thus determine that the cost of the workmen's compensation annuity of $3,826 per year for a 41-year-old widow would be approximately $72,235. How much would her social security payments reduce this cost?

Under the social security survivorship program, our "representative" widow would receive the maximum payment, $254 per month or $3,048 annually, as long as she has two minor dependents (8 years); and $190.60 per month until her younger child reaches 18 (4 additional years).[8] But after her children are both 18 (she is now age 53), she will receive no further social security payments until she reaches age 62, when her retirement benefits of $95.30 per month begin—to continue until her death.

To restore to the widow the same two-thirds of earnings in the average California death case, as above, and at the same time offset her full social security payments against this amount, workmen's compensation would have to provide for 8 years only $788 annually; for 4 years, slightly more; for the 9 years social security is not being paid, compensation would provide the total benefit; then when retirement payments begin, the difference would be $2,682 per year for the rest of her life.[9] The total cost of the resulting compensation annuity, in present value terms,

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[7] Average annual wage of California workers covered by unemployment compensation in 1958 ($5,073) adjusted upward by 13.1 percent (see Note on Deriving Estimates of Loss, ch. 4) times two-thirds.

[8] If she worked outside the home during this period, her social security benefits would be reduced if she earned $1,200 a year or over. But this does not affect our calculations (which are based on 1960 social security payments).

[9] Assumes a life expectancy of 35.5 years at age 41, State of California, Department of Vital Statistics, Special Reports, op. cit.

taking account of death and remarriage, would be $45,520.

But, although the age of the widow in this case is "representative," it is important to note from the chart that the cost of an annuity at this age is close to its peak. For widows both younger and older, the cost of an annuity for life or until remarriage will obviously be considerably less. In fact, since the actual social security benefits of younger widows and older widows are likely to be greater, the net cost of the workmen's compensation portion of the annuity is likely to be still lower. Furthermore, to the extent that social security benefits continue to rise, workmen's compensation costs would be trimmed.

On the other hand, the lower "offset" figure does not include, of course, those widows who receive no social security benefits—primarily those with no minor dependent children or those whose husbands were not covered at time of death. For example, the cost of an annuity with the same restoration assumptions [10] for a 22-year-old widow without children would be approximately $49,355.

These examples all assume a restoration of two-thirds of the wage loss of the average California death case. What is the rationale for this figure? It was chosen because it corresponds to (although it is slightly more generous than) the actual loss she is estimated to sustain considering all the factors accounted for in chapter 3.

The terms of the annuity might be designed to reflect the changing needs of the widow, restoring, for example, two-thirds of her losses during the period in which she has minor dependents, dropping to, say, 50 percent restoration of losses thereafter. Or the amount might be set at two-thirds for the widows with children and 50 percent for those without.

[10] The workmen's compensation annuity could also be offset by the new veterans' survivorship benefits, if desired.

This may make the benefit policy unattractive to those who argue that widows' benefits should not be limited to 75 percent or even 100 percent of wage loss; and that it is unfair to offset against the worker's OASDI share. The purpose of an offset policy is not benefit tidiness for its own sake. It is to assure an adequate amount of economic protection over the lifetime of all beneficiaries, even if it results, at some points in time, in a smaller combined benefit payment to certain widows. Correctly conceived, its overall effect would be substantially to raise the average level of protection.

Two things stand out in these cost estimates: first, although the estimated present value of the annuities are considerably higher than the benefits provided by nonannuity States, the total cost for the measure of economic security they provide is relatively modest. Second, the actual amount which these annuities would add to total cost of compensation benefits would not be large. Death cases now account for approximately 10 to 15 percent of all indemnity benefits, and all workmen's compensation costs represent a nationwide average of 1 percent of payroll costs. Thus, even if the schedule of annuity benefits selected by any jurisdiction doubled or even tripled its present average death payment, the overall impact of this cost increase would be small.

Benefit integration will be a moot issue if workmen's compensation is subsumed by another program. But if compensation is to remain a State system, the advantages of this policy of benefit coordination are obvious: it assures an annuity to survivors and relates payments to need. By coordinating the two systems of survivors' benefits, it provides a solid measure of economic security to widows at a reasonable cost, while at the same time assuring that the important objectives of workmen's compensation benefits are achieved.

Special Labor Force Report

EDITOR'S NOTE.—*Other articles in this series cover such subjects as the work experience of the population, the marital and family characteristics of workers, and the employment of high school graduates, and include the annual report on the labor force. Reprints of all articles in the series, including in most cases additional detailed tables and an explanatory note, are available upon request to the Bureau or to any of its regional offices (listed on the inside front cover of this issue).*

Multiple Jobholders in December 1960

JACOB SCHIFFMAN*

RECENT HIGH LEVELS of unemployment have given rise to an increased interest in the number and work activity of persons holding more than one job. Many unemployed persons question someone's holding more than one job while millions cannot find work. Other interested groups, many of whom also disapprove of dual jobholding, are employers, who often feel that the job performance of their employees suffers when they take an outside job, and union representatives, who generally believe that a worker should be paid enough on his regular job so that he will not have to seek additional sources of income. Moreover, some union officials hold that multiple jobholders often are not sufficiently concerned about maintaining either wage levels or union membership.

The following analysis [1] will provide a basis for appraising some of the ideas commonly held on dual jobholders by presenting information on their characteristics, the occupations and industries in which they are employed, and recent trends in the numbers of such workers. It also covers data gathered for the first time on their work schedules and gives more detailed information on their hours of work.

A total of 3 million persons held more than one job in December 1960, representing 4.6 percent of all persons employed (table 1). This dual-job count included about 1¾ million workers with more than one wage or salary job during the week and a relatively large number of about 1¼ million persons who—contrary to the popular conception of moonlighters—combined some form of self-employment and a wage or salary job.[2] Counted in the group with more than one employer are such persons as the factory operative who works evenings in a drug store, the postal clerk who works his off hours at a gasoline station, and the office secretary who has a weekend job in a department store. The second group includes such persons as the factory operative who repairs watches or TV sets at home, the school teacher who tutors privately, and the farmer who has a spare job driving the local school bus. About one-half of

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[1] The analysis is based primarily on information from supplementary questions in the December 1960 monthly survey of the labor force, conducted for the Bureau of Labor Statistics by the Bureau of the Census through its Current Population Survey. The data relate to the week of December 4 through 10.

An article based on a similar survey in 1959 was issued as Special Labor Force Report No. 9 and appeared in the October 1960 issue of the *Monthly Labor Review* (pp. 1045–1051). Earlier surveys on multiple jobholders have been summarized by the Bureau of the Census in Current Population Reports, Series P–50, Nos. 30, 74, 80, and 88 and in Series P–8, No. 21. The 1958 survey was also analyzed in the July 1959 issue of the *Review* (pp. 769–771).

[2] Also counted in the survey were a small number of persons with a primary job (the one at which they worked the longest number of hours during the survey week) in unpaid family work and a secondary wage or salary job. Persons who worked for more than one private family (as a maid, laundress, babysitter, odd-job worker, etc.) but held no other job during the week were counted as having only one job.

Only about 70,000 persons with more than one job had changed from one job to the other during the survey week. Also, few jobholders can be presumed to have had three or more jobs at the same time; information for December 1959 showed that an estimated 80,000 persons out of a total of 3 million multiple jobholders had three or more jobs.

these persons were farmers on their self-employed job; most of the remainder consisted of proprietors, professionals, and a small number of craftsmen. For two-thirds of the self-employed group, self-employment was the secondary rather than the primary job, i.e., the one at which they worked the longest number of hours.

Holding two jobs is presumably more feasible for persons who are their own "boss" on one job; they can more easily adjust their hours of self-employment to the schedule of their wage or salary job, and another family member may assume some of the duties and responsibilities at their farm or business during their absence. The large number of farmers among dual jobholders is probably associated with the small cash income of many marginal farmers and the opportunities for better paying jobs in nearby industrialized areas. As the agricultural sector of the economy declines in importance and farmers take on nonfarm jobs, many prefer to continue living on their farms, operating them at a reduced level. More than one-third of all employed persons living on farms, including single and dual jobholders, had primary jobs in nonagricultural industries in December 1960.

Stability in Dual Jobholding

One of the more important findings of recent multiple jobholding surveys has been the comparative stability during the past 5 years in both the number of dual jobholders and the rate of dual jobholding [3] despite changing economic conditions (table 2). Some decline has occurred in the number of farm jobs reported by dual jobholders—reflecting in part the shifting of the survey in 1959 from July to December—but the number of nonfarm jobs held by dual jobholders has shown little change. Neither the number of nonfarm jobs of multiple jobholders nor the overall rate of multiple jobholding has shown any consistent relationship to the marked changes in unemployment in recent years. For example, between July of 1957 and 1958, when the rate of unemployment (unadjusted for seasonality) rose sharply from 4.3 to 7.5 percent, the dual jobholding rate and the number of nonfarm jobs of dual jobholders declined somewhat. However, between December 1959 and December 1960, another period of rising unemployment rates (5.2 to 6.4 percent), the dual jobholding rates and the number of nonfarm jobs held by multiple jobholders remained unchanged.

Steadiness in multiple jobholding has also been evident in dual jobholding rates of wage and salary workers in individual nonfarm industries (table 3). Even among workers in manufacturing, who are particularly affected by changes in economic conditions, the proportion having two or more jobs has changed very little in recent years.

[3] The number of persons with two or more jobs as a percent of the number employed.

TABLE 1. TYPE OF INDUSTRY AND CLASS OF WORKER OF PRIMARY AND SECONDARY JOBS FOR PERSONS WITH TWO OR MORE JOBS, DECEMBER 1960

[Workers in thousands]

Industry and class of worker of primary job	Total employed	Total persons with two or more jobs		Industry and class of worker of secondary job					
		Number	Percent of total employed	Agriculture			Nonagricultural industries		
				Total	Wage and salary workers	Self-employed workers	Total	Wage and salary workers	Self-employed workers
Total	66,009	3,012	4.6	587	135	452	2,425	2,025	400
Agriculture	4,950	332	6.7	138	98	40	194	193	1
Wage and salary workers	1,454	97	6.7	81	41	40	16	15	1
Self-employed workers	2,736	208	7.6	51	51	(1)	157	157	(1)
Unpaid family workers	759	27	3.6	6	6	(2)	21	21	(2)
Nonagricultural industries	61,059	2,680	4.4	449	37	412	2,231	1,832	399
Wage and salary workers	53,847	2,489	4.6	443	31	412	2,046	1,647	399
Self-employed workers	6,576	184	2.8	6	6	(1)	178	178	(1)
Unpaid family workers	636	7	1.1	----	----	(2)	7	7	(2)

[1] Self-employed persons with a secondary farm or business, but no wage or salary job, were not counted as multiple jobholders.

[2] Persons whose primary job was as an unpaid family worker were counted as multiple jobholders only if they also held a wage or salary job.

NOTE: Because of rounding, sums of individual items may not equal totals.

Industry

Wage earners most likely to have a second job in December 1960 were those employed in the postal service and other public administration, entertainment and recreation, educational services, farming, construction, and forestry, fisheries, and mining. These include workers in industries with high as well as low earnings and job security. While need for supplementary income is probably one of the primary reasons why persons take second jobs, the frequency of dual jobholding depends to a large extent on particular circumstances in each industry. Wage and salary workers in farming and construction often have to work for several employers during the course of a week in order to obtain a full week's work. Similarly, persons in the entertainment industry are likely to have several engagements during the week. The high rate of dual jobholding among teachers is probably associated with the comparatively small number of hours of actual teaching, the ability to use their skills and education in other jobs, the shortage of teachers, and aspirations for a standard of living in keeping with their professional status. The dual job count of teachers also reflects the inclusion of those who worked for more than one school or school system and were thus reported as having more than one job.

The high rates of dual jobholding among postal workers (11 percent) and others employed in public administration (7 percent)—which includes such occupations as firemen, policemen, and guards—may result from the scheduling of their principal jobs and the greater convenience with which they can arrange for a second job during off hours. Professional workers in public administration may also find more opportunities for additional employment because of their skills and experience.

Although the practice of "moonlighting" is commonly associated with factory workers, relatively few of them (4 percent) had more than one job in December 1960 and only a very small proportion of dual jobholders had their extra jobs in factories. Although 22 percent of all dual jobholders had primary wage or salary jobs in manufacturing, only 7 percent had secondary jobs in this industry, which provides little opportunity for part-time work. The number of persons with two jobs both in manufacturing was particularly small—only 80,000, or about one-eighth of the 650,000 wage and salary factory workers with a second job; nearly one-fourth were farmers on the side and about half of them had additional jobs as wage or salary workers in trade and service or operated their own business.

The availability of part-time work in trade and service industries accounts for the large proportion of dual jobholders with secondary jobs in these industries. Over half of all the secondary jobs in December 1960 were in trade or service, 44 percent were in wage and salary jobs, and 11 percent in self-employment.

Personal Characteristics

A much higher proportion of men than women hold additional jobs. About 6 percent of all employed men had two or more jobs in December 1960 compared with only 2 percent of the women. Married men accounted for three-fourths of all multiple jobholders in December, although they comprised only about one-half of all employed persons, and their rate of dual jobholding (6.5 percent) was considerably higher than that for single men (3.5 percent) or for men who were widowed, divorced, or separated (3.9 percent). The greater financial responsibility of married men was also

TABLE 2. TYPE OF INDUSTRY AND CLASS OF WORKER OF PRIMARY AND SECONDARY JOBS FOR PERSONS WITH TWO OR MORE JOBS,[1] 1956–60

[Numbers in thousands]

Industry and class of worker	December 1960 [2]	December 1959	July 1958	July 1957	July 1956
Primary job: Number	3,012	2,966	3,099	3,570	3,653
Percent of total employed	4.6	4.5	4.8	5.3	5.5
Agriculture	332	321	629	858	866
Wage and salary workers	97	104	264	285	295
Self-employed workers	208	199	264	385	402
Unpaid family workers	27	18	101	188	169
Nonagricultural industries	2,680	2,645	2,470	2,712	2,787
Wage and salary workers	2,489	2,451	2,257	2,447	2,569
Self-employed workers	184	182	198	237	200
Unpaid family workers	7	12	15	28	18
Secondary job	3,012	2,966	3,099	3,570	3,653
Agriculture	587	649	850	1,035	1,111
Wage and salary workers	135	130	362	506	485
Self-employed workers	452	519	488	529	626
Nonagricultural industries	2,425	2,317	2,249	2,535	2,542
Wage and salary workers	2,025	1,907	1,905	2,187	2,202
Self-employed workers	400	410	344	348	340

[1] Self-employed persons and unpaid family workers with a secondary farm or business were not counted as multiple jobholders. Also excluded were persons whose only additional job was in unpaid family work.
[2] Data for 1960 include Alaska and Hawaii.

NOTE: Because of rounding, sums of individual items may not equal totals.

TABLE 3. INDUSTRY AND CLASS OF WORKER OF PERSONS WITH TWO OR MORE JOBS, 1957–60

Industry group and class of worker	Persons with two or more jobs					
	Percent distribution, December 1960 [1]		As percent of all employed persons in industry of primary job			
	Primary job	Secondary job	December 1960 [1]	December 1959	July 1958	July 1957
All industries	100.0	100.0	4.6	4.5	4.8	5.3
Agriculture	11.0	19.5	6.7	6.7	9.3	11.0
Wage and salary workers	3.2	4.5	6.7	7.7	13.2	12.1
Self-employed workers	6.9	15.0	7.6	7.2	8.1	10.7
Unpaid family workers	.9	[2]	3.6	2.5	6.9	10.0
Nonagricultural industries	89.0	80.5	4.4	4.3	4.2	4.6
Wage and salary workers	82.6	67.2	4.6	4.5	4.4	4.7
Forestry, fisheries, and mining	1.0	.4	5.6	7.7	5.4	6.7
Construction	6.2	4.0	5.6	5.7	6.6	5.9
Manufacturing	21.7	7.3	4.0	4.3	3.9	4.3
Durable goods	13.1	2.9	4.4	5.0	4.1	4.2
Nondurable goods	8.6	4.3	3.6	3.4	3.7	4.3
Transportation and public utilities	7.3	5.5	4.8	4.4	4.2	4.2
Wholesale and retail trade	13.7	16.6	3.9	3.2	3.9	3.9
Wholesale	3.6	1.4	4.9	3.8	4.5	4.1
Retail	10.1	15.2	3.6	3.0	3.7	3.8
Eating and drinking places	2.4	3.2	4.6	1.6	3.0	3.2
Other retail trade	7.7	12.1	3.4	3.3	3.9	4.0
Service and finance	24.4	27.0	4.8	4.6	3.9	4.6
Finance, insurance, and real estate	3.7	4.5	4.2	3.8	3.3	4.5
Business and repair services	1.9	2.5	5.0	4.2	5.3	4.7
Private households	1.3	3.0	1.6	2.1	1.4	2.3
Personal services, except private household	1.0	1.5	2.1	2.6	2.4	4.0
Entertainment and recreation	1.2	3.7	8.8	7.5	10.5	9.7
Educational services	9.3	4.9	8.2	7.0	5.9	6.1
Professional services, except education	5.9	7.0	4.7	5.2	3.9	4.7
Public administration	8.4	6.4	7.7	8.6	7.1	8.4
Postal service	2.1	1.2	10.8	12.6	8.5	9.6
Other public administration	6.3	5.2	7.0	7.6	6.8	8.2
Self-employed workers	6.1	13.3	2.8	2.8	3.1	3.7
Unpaid family workers	.2	[2]	1.1	2.0	2.2	3.9

[1] Data for 1960 include Alaska and Hawaii.
[2] Persons whose only extra job was as an unpaid family worker were not counted as multiple jobholders.

NOTE: Because of rounding, sums of individual items may not equal totals.

reflected in the relatively high dual jobholding rate for men from 20 to 54 years of age.[4] The proportion of employed women with more than one job varied little with respect to either marital status or age.

About the same proportion of white and nonwhite workers, both men and women, had two or more jobs in December. However, nonwhite men in agriculture were more likely to hold two or more jobs than were white men, while the opposite was true in nonagricultural industries.

Occupation

Farmers and professional and technical workers are two-job holders to a greater extent than persons employed in other major occupation groups (table 4). About 8 percent of the farmers and 7 percent of the professional and technical workers had a second job in December 1960. One-fourth of all multiple jobholders were in these two major occupation groups, compared with fewer than one-sixth of the workers with one job. Other workers with high rates of dual jobholding included protective service workers, farm laborers, and drivers and deliverymen.

In virtually all occupational groups, men had considerably higher rates of dual jobholding than women. For example, in clerical occupations, which include postal workers as well as a great variety of office workers, 7.5 percent of the men were multiple jobholders compared with only 1.6 percent of the women. Among teachers below the college level, the rates for men and women were 23.5 percent and 2.5 percent, respectively.

The occupational distribution of secondary jobs held by dual jobholders differed in several important respects from that of their primary jobs. About twice as many multiple jobholders were farmers on their second job as were farmers on their principal job. Similarly, more dual jobholders had extra jobs in sales and service work, where opportunities for part-time employment are good, than had their main jobs in these

[4] Previous surveys taken in July showed that teenage boys had the highest rate of dual jobholding at that time. However, the rate probably reflected a fairly large number of teenagers who were changing summer jobs during the survey week rather than holding two jobs simultaneously.

occupations. On the other hand, substantially fewer dual jobholders were clerical workers, craftsmen, or operatives on their second jobs. About one-third as many multiple jobholders were elementary and high school teachers on their secondary as on their primary jobs.

Relatively few (30 percent) of the 3 million dual jobholders in December had two jobs in the same major occupation groups. In only two of these groups, professional and technical workers and farm laborers, were as many as one-half of the workers employed in the same broad occupation. Nevertheless, white-collar workers tended to have their second jobs in the same or another white-collar occupation, and manual workers, both farm and nonfarm, usually remained in this type of work. Approximately four-fifths of all professional and technical workers and three-fifths of all managers and proprietors, clerical workers, and sales workers had their extra jobs in some white-collar occupation. About 4 out of 5 dual jobholding male teachers below the college level had their second jobs in a white-collar occupation. Craftsmen, operatives, and nonfarm laborers tended to work in their own major occupation or as farmers, and farmers worked for the most part as farm or nonfarm laborers or as operatives.[5] Out of every 10 service workers (excluding private households), 4 were employed in the same occupational group on their second job and 1 was a private household worker.

[5] By definition, farmers who were self-employed on a secondary farm or nonfarm job were not counted as multiple jobholders.

Hours of Work

Most dual jobholders work full time (35 hours or more) on one job and part time on another. Nearly two-thirds of all multiple jobholders at work on both jobs during the survey week fell within this category (table 5). Most of the others worked part time on both jobs, and only a few (6 percent) worked full time on two jobs. Less than one-fourth of the men but more than one-half of the women worked part time on both jobs. It

TABLE 4. OCCUPATIONAL DISTRIBUTION OF PERSONS WITH ONE JOB ONLY AND OF PERSONS WITH TWO OR MORE JOBS, AND RATE OF MULTIPLE JOB HOLDING BY OCCUPATION AND SEX, DECEMBER 1960

Occupation group	Percent distribution			Persons with two or more jobs as percent of all employed persons in occupation group of primary job		
	Persons with one job only	Persons with two or more jobs				
		Primary job	Secondary job	Both sexes	Male	Female
All occupations	100.0	100.0	100.0	4.6	5.9	2.0
Professional, technical, and kindred workers	11.5	18.5	17.7	7.2	8.9	3.9
Medical and other health workers	2.0	1.9	1.7	4.2	5.8	3.0
Teachers, except college	2.5	5.1	1.9	8.9	23.5	2.5
Other professional, technical, and kindred workers	6.9	11.5	14.1	7.3	7.4	6.9
Farmers and farm managers	4.0	7.0	14.5	7.8	7.9	4.7
Managers, officials, and proprietors, except farm	11.1	9.6	9.5	3.9	4.4	1.3
Clerical and kindred workers	15.0	11.2	7.1	3.5	7.5	1.6
Sales workers	7.3	6.3	10.0	4.0	4.8	2.8
Retail trade	4.4	3.1	5.5	3.2	4.6	2.4
Other sales workers	2.9	3.2	4.5	5.1	4.9	6.8
Craftsmen, foremen, and kindred workers	12.4	13.5	7.9	5.0	5.1	1.7
Carpenters and construction craftsmen [1]	3.5	4.2	3.2	5.3	5.3	(3)
Mechanics and repairmen	3.0	3.6	2.4	5.4	5.5	
Other craftsmen, foremen, and kindred workers [2]	5.9	5.8	2.3	4.5	4.7	1.5
Operatives and kindred workers	17.7	15.0	12.1	3.9	5.1	.7
Drivers and deliverymen	3.5	4.5	5.1	5.8	5.9	
Other operatives and kindred workers	14.2	10.5	7.0	3.4	4.9	.7
Private household workers	3.7	1.2	2.0	1.5		1.5
Service workers, except private household	9.4	9.1	10.4	4.4	6.6	2.5
Protective service workers	1.1	2.2	1.5	8.8	8.9	7.7
Waiters, cooks, and bartenders	2.5	1.9	2.9	3.5	5.0	2.9
Other service workers	5.8	5.0	6.1	3.9	6.1	2.3
Farm laborers and foremen	2.8	3.7	4.0	5.8	6.8	3.2
Laborers, except farm and mine	5.1	4.8	4.8	4.4	4.5	

[1] Figures published for December 1959 on persons with 2 or more jobs as percent of all employed persons should be corrected as follows: 6.2 percent for both sexes and 6.2 percent for males.

[2] Figures published for December 1959 on persons with 2 or more jobs as percent of all employed persons should be corrected as follows: 4.6 percent for both sexes, 4.8 percent for males, and 0.6 percent for females.

[3] Percent not shown where base is less than 100,000.

NOTE: Because of rounding, sums of individual items may not equal totals.

is not surprising that the men worked longer hours, since nearly 90 percent of the male dual jobholders were married men with heavier financial responsibilities. Multiple jobholders were most likely to have full-time jobs if their primary wage and salary jobs were in manufacturing, transportation and public utilities, and public administration. Full-time jobs were less common for dual jobholders in trade and service—a larger proportion (one-fourth) of whom were women—and for workers in construction (an industry with a characteristically short workweek). Combinations of two part-time jobs were most common in agriculture.

As one would expect, the hours worked by multiple jobholders were considerably longer than those for persons with only one job. Nearly three-fourths of the dual jobholders worked more than 40 hours during the survey week, compared with less than one-third of the workers with one job. The differences in hours worked were greatest for wage and salary workers in manufacturing, transportation, and public administration. About four-fifths of the dual jobholders with a primary job in manufacturing worked over 40 hours, as against only about one-fifth of the factory workers with a single job. The difference in hours worked was much less for farmers and nonfarm proprietors, because they typically work long hours even when they have only one job.

The average (median) number of hours worked by dual jobholders was 50 hours on both jobs and 11 hours on secondary jobs.[6] The average for both jobs ranged from 52 to 55 hours for workers with primary wage and salary jobs in manufacturing, transportation, and public administration. It ranged from 46 to 48 hours for workers in trade, service, and construction, who had shorter hours on both their primary and secondary jobs.

Workers with secondary wage and salary jobs in manufacturing averaged 14 hours on these jobs, and in transportation, 15 hours. At the other extreme, workers with additional jobs in service industries averaged only 7 hours at these jobs. The number of hours worked in supplementary employment differed little by occupation of second job, except for longer hours for operatives (15), most of whom were probably in manufacturing, and shorter hours for professional and technical workers (7). Men at work on two jobs averaged 11 hours on their second job, compared with 7 hours for women.

[6] Data on median hours of secondary jobs refer to dual jobholders at work on primary and secondary jobs; data on median hours on both jobs also include dual jobholders who were absent all week from their secondary job.

TABLE 5. PERSONS AT WORK ON TWO OR MORE JOBS BY FULL-TIME AND PART-TIME STATUS, AND MEDIAN HOURS WORKED, BY MAJOR INDUSTRY GROUP, DECEMBER 1960

Industry and class of worker	Distribution of persons at work on both jobs, by full-time and part-time status,[1] by industry of primary job				Median hours		
					On both jobs,[2] by industry of primary job	On secondary job	
	Total	Full time on both jobs	Full time on primary job, part time on secondary job	Part time on both jobs		By industry of primary job	By industry of secondary job
All industries	100.0	6.1	64.9	29.0	50	11	11
Agriculture [3]	100.0	7.9	43.2	49.0	46	13	11
Wage and salary workers	(4)				(4)	(4)	9
Self-employed workers	100.0	12.3	47.7	40.0	52	14	11
Nonagricultural industries	100.0	5.9	67.4	26.7	50	10	11
Wage and salary workers [3]	100.0	5.9	67.8	26.3	50	11	11
Construction	100.0	2.3	62.1	35.6	46	10	(4)
Manufacturing	100.0	7.6	74.3	18.0	52	12	14
Durable goods	100.0	9.6	74.1	16.3	53	12	(4)
Nondurable goods	100.0	4.9	74.6	20.5	50	11	11
Transportation and public utilities	100.0	4.9	73.2	21.9	52	12	15
Wholesale and retail trade	100.0	4.7	57.9	37.4	47	10	13
Service and finance	100.0	5.3	63.0	31.7	48	9	7
Public administration	100.0	8.0	78.7	13.3	55	13	10
Self-employed and unpaid family workers	100.0	6.1	62.8	31.1	53	8	[5] 11

[1] Workweeks of 35 hours or more were counted as full time; those of less than 35 hours, as part time.

[2] Includes dual jobholders not at work on secondary job.

[3] Includes a small number of persons who were unpaid family workers on their primary jobs, not shown separately.

[4] Percent and median hours not shown where base is less than 100,000.

[5] Includes a small number of workers in forestry, fisheries, and mining, not shown separately.

[6] Relates only to persons who are self-employed on secondary jobs. Persons whose only additional job was in unpaid family work were not counted as multiple jobholders.

NOTE: Because of rounding, sums of individual items may not equal totals.

Work Schedule of Secondary Job

Information on the work schedules of secondary jobs held by dual jobholders was collected for the first time in the December 1960 survey. One of the principal findings was that most dual jobholders are not "moonlighters" on their spare jobs. In response to a question on whether the hours worked on the second job were "mostly at night, on weekends, or during weekday working hours," only 34 percent of the dual jobholders were reported as working mostly at night; the largest proportion—42 percent—worked on second jobs mostly during weekday working hours and 24 percent worked primarily on weekends [7] (table 6). The proportion working at night was highest (about two-fifths) among wage and salary workers with secondary jobs in trade, service, and public administration, where there are opportunities for nightwork in retail stores, hotels, recreational establishments, postal service, government protective services, etc., and among nonfarm self-employed, who have considerable flexibility in hours of work. Fewer than a third of the secondary jobs in manufacturing were at night; half of them were during weekday work hours. Night schedules were even less frequent and weekday working hours more common in agriculture, where work has to be done during the daylight hours, and in transportation and public utilities. As might be expected, weekend jobs were most frequent in trade and service industries.

Data on occupation and work schedules of secondary jobs also showed that nightwork was more common and work during weekday working hours less frequent in occupations closely related to service, trade, and public administration than in occupations more allied to manufacturing, transportation, and agriculture. Thus there was more nightwork and less work during weekday working hours in white-collar occupations as a group (professional, managerial, and clerical and sales jobs) than in blue-collar occupations (craftsmen, operatives, and nonfarm laborers) or than among farmers and farm laborers.

Women who were dual jobholders had a slightly greater tendency to work at night on their second jobs (38 percent) than did men (33 percent). This undoubtedly results from the heavier concentration of women in extra evening jobs in trade and service. About equal proportions of men and women worked during weekday working hours on their extra jobs, but the proportion working weekends was a little larger for men (24 versus 21 percent).

Work schedules of secondary jobs varied little by major industry and class of worker of primary job. Multiple jobholders with their principal jobs in farming or self-employment were more likely than others to hold their secondary jobs during weekday working hours. As previously stated, it is probably easier for self-employed persons than wage and salary workers to adjust the hours of their primary job to a second job which is available during regular working hours. Furthermore, many dual jobholding farmers and farm laborers divide the daylight working hours between two part-time farm jobs. Relatively few persons with primary jobs in educational services, most of whom are teachers, worked

TABLE 6. WORK SCHEDULE ON SECONDARY JOB [1] BY INDUSTRY AND CLASS OF WORKER OF SECONDARY JOB FOR PERSONS AT WORK ON TWO OR MORE JOBS, DECEMBER 1960

[Percent distribution]

Industry and class of worker of secondary job	Total at work on two or more jobs	Work schedule on secondary job [1]		
		Mostly at night	Mostly on weekends	Mostly during weekday working hours
All industries	100.0	33.7	24.0	42.3
Agriculture	100.0	16.7	22.9	60.4
Wage and salary workers	100.0	.9	11.2	87.9
Self-employed workers	100.0	21.3	26.3	52.4
Nonagricultural industries	100.0	37.9	24.1	38.0
Wage and salary workers [2]	100.0	37.3	23.7	39.0
Construction	[3]			
Manufacturing	100.0	31.0	20.5	48.5
Durable goods	[3]			
Nondurable goods	100.0	33.3	20.4	46.3
Transportation and public utilities	100.0	13.6	18.6	67.9
Wholesale and retail trade	100.0	42.3	28.8	29.0
Wholesale	[3]			
Retail	100.0	45.0	30.3	24.7
Service and finance	100.0	41.0	25.4	33.6
Private households	[3]			
Educational services	100.0	60.9	13.5	25.6
Other service and finance	100.0	39.2	30.1	30.7
Public administration	100.0	44.7	11.8	43.4
Postal service	[3]			
Other public administration	100.0	43.5	12.9	43.5
Self-employed workers	100.0	40.8	26.2	33.0

[1] For definition, see text footnote 7.
[2] Includes workers in forestry, fisheries, and mining, not shown separately.
[3] Percent not shown where base is less than 100,000.

NOTE: Because of rounding, sums of individual items may not equal totals.

[7] Nightwork refers to work done primarily between the hours of 6 p.m. and 6 a.m. on Monday through Friday. Weekday working hours relate to those between 6 a.m. and 6 p.m. on Monday through Friday. Weekend work includes work done on Saturday or Sunday, whether at night or during the day.

mostly during weekday working hours on their second jobs; large proportions worked nights and on weekends.

Multiple Jobholders and the Unemployed

The statement has often been made during periods of high unemployment that dual jobholders have jobs which should be given to the unemployed. Presumably this suggestion is directed primarily at the 3 out of 4 dual jobholders who have a full-time job. It is also suggested that the number of unemployed would drop considerably if multiple jobholders were to relinquish their extra jobs. In considering the question of how many unemployed would find jobs under these circumstances, it is obvious that no accurate estimate can be made because of a great many factors which would limit this number and whose influence cannot be measured. Some of these are the ability of unemployed persons to meet qualifications for specific jobs, differences in location of the unemployed and secondary jobs, and problems of matching jobs usually held only by men or only by women. Nevertheless, it is possible to identify at least some of the secondary jobs which are unsuitable for the unemployed.

TABLE 7. MAJOR OCCUPATION GROUP OF SECONDARY JOB FOR PERSONS WITH TWO OR MORE JOBS AND OF LAST FULL-TIME JOB FOR UNEMPLOYED PERSONS, DECEMBER 1960

[In thousands]

Major occupation group	Secondary job of persons with two or more jobs			Last full-time job of unemployed persons [1]
	Total	Self-employed on secondary job	Wage and salary on secondary job	
All occupations	3,012	852	2,160	4,172
Professional and technical workers, managers, officials, and proprietors, except farm	817	254	563	240
Professional and technical workers	532	100	432	133
Managers, officials, and proprietors, except farm	285	154	131	107
Clerical and sales workers, craftsmen, operatives, service workers, and laborers	1,757	163	1,594	3,911
Clerical workers	214	9	205	371
Sales workers	302	37	265	132
Craftsmen	238	65	173	660
Operatives	365	20	345	1,273
Service workers, including private households	374	12	362	619
Laborers, except farm and mine	145	12	133	615
Farm laborers	119	8	111	241
Farmers and farm managers	438	434	4	20

[1] Data relate only to unemployed persons who at sometime held a full-time civilian job for a period of at least 2 weeks.

NOTE: Because of rounding, sums of individual items may not equal totals.

The data in table 7 show the occupation of unemployed persons in December 1960 and the occupation and class of worker of dual jobholders on their secondary jobs. About 850,000 dual jobholders in December had secondary jobs operating their own farms or businesses—positions which the unemployed could not reasonably be expected to fill. Another 560,000 dual jobholders had extra wage or salary jobs as managers and officials and as professional and technical workers. However, there were only about 240,000 unemployed managers, officials, and professionals who could conceivably take these secondary jobs. It would be very unlikely that unemployed persons in other occupations would have the skills necessary to qualify for the remaining 320,000 secondary jobs in the managerial and professional field. Thus about 1.2 million secondary jobs in professional and managerial occupations or in self-employment could not reasonably be expected to be filled by unemployed persons. Of the remaining 1.8 million wage and salary secondary jobs in nonprofessional and nonmanagerial occupations, the number that could be taken by the unemployed would depend on their geographic location and on such other limiting factors as have been mentioned.

Even if the unemployed workers could be referred to these specific jobs, it is doubtful whether they would want them because of the small amount of work, and presumably earnings, they provide. On the typical second job in a nonagricultural industry, the dual jobholder worked 11 hours during the entire survey week. Only 6 percent, or 130,000, of the second wage or salary jobs in nonfarm work were full time (35 hours a week or more). There is no way of knowing from the survey data whether combinations of these very small secondary jobs into full-time work would be possible in some instances, but it is unlikely that these would be numerous.

Finally, many of the extra jobs held by dual jobholders are only temporary. Excluding about 70,000 persons who changed from one job to another during the survey week, about 300,000, or 1 out of 10, dual jobholders no longer held both jobs in the following week. Apparently, the turnover in this group is unusually high.

Retraining the Unemployed

EDITOR'S NOTE.—*This is the third of a series of articles on the retraining of workers to bring their skills into line with technological progress. The first, in the August 1961 issue, covered retraining legislation in two Western European countries. The second, in the September issue, summarized this country's existing State and Federal legislation relating to retraining. Articles to follow will deal with a community retraining project and the considerations involved in developing a Government program of retraining for the long-term unemployed.*

III—Skill Improvement Training for Electricians and Plumbers

RENNARD DAVIS*

IN LINE WITH the current search for approaches to the broad problem of retraining the technologically unemployed, this study examines two craft union training programs designed to keep skilled union members abreast of technological progress.[1] The two unions are the United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry and the International Brotherhood of Electrical Workers (IBEW).

The Bureau of Labor Statistics predicts a rapid increase in employment opportunities between 1960 and 1970 for these skilled craftsmen and estimates that by 1970, 112,000 additional electricians and 224,000 additional plumber-pipefitter journeymen will be in demand. If the apprenticeship programs of the two unions remain at their present size, it is expected that they will produce only 36 percent of the needed electricians and 17 percent of the needed plumbers-pipefitters.[2] Thus the present journeymen in these trades may expect ample job opportunities in the 1960's, provided they can meet their industries' demands for new and higher skills.

Despite the favorable employment outlook in these skilled occupations, advanced journeyman training in both the IBEW and the Plumbers and Pipefitters union has been sought by an increasing number of skilled workers. These journeymen have been troubled by competition from young apprenticeship graduates schooled in the latest techniques of their trades and from members of other crafts who work with new tools, materials, and methods over which jurisdiction has not been established.

Programs for upgrading the skills of journeymen are recent at the international union level. The IBEW's program began in 1959, and the Plumbers and Pipefitters union enlarged the scope of its training to include advanced courses for journeymen in 1955. In some aspects, the development of the two programs has moved in different directions. In the IBEW, the function of the journey-

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[1] Material for this article was obtained primarily through interviews with representatives of the International Brotherhood of Electrical Workers, the United Association of Journeymen and Apprentices in the Plumbing and Pipefitting Industry of the United States and Canada, the National Electrical Contractors Association, the National Constructors' Association, the International Training Fund (negotiated by the Plumbers and Pipefitters union), and the Maryland Mechanical Contractors Association.

[2] *Manpower Requirements and Training Needs in Construction Occupations, 1960-70* (U.S. Department of Labor, Bureau of Apprenticeship and Training, 1959), p. 6. For supplementary information of the apprenticeship programs of the plumbing and electrical industries, see Sumner H. Slichter, James J. Healy, and E. Robert Livernash, *The Impact of Collective Bargaining on Management* (Washington, D.C., The Brookings Institution, 1960), pp. 91-98.

man training program is to prepare course material to be used at the local level for the craftsman trainee, while in the Plumbers and Pipefitters union, the efforts are directed more toward the development of competent instructors.

In both unions, employers have financially assisted journeyman training in locals. Collective bargaining agreements frequently include provisions under which local employers agree to contribute fixed amounts—generally ¼ cent to 2½ cents per man-hour—to a fund managed by a joint apprenticeship and journeyman training committee. In many cases, local unions also contribute a part of their union dues or require the membership to pay a regular, fixed amount to the fund. The principal function of the committee is to allocate its funds to the various programs of the union training department.

At the international level, the IBEW skill improvement program is financed by the union. The Plumbers and Pipefitters union has negotiated with the National Constructors' Association a fund consisting of employer contributions of 2½ cents per man-hour to help supplement the funds of local joint apprenticeship and journeyman training committees, but the general costs of operating the international training department are covered by the international.

Local training programs are of two types: short-term programs in a specific skill, and general courses which can be useful in a number of different jobs. The programs are often administered by the union staff, although the joint committees officially select the instructors (usually outstanding journeymen) and work with the unions in establishing the curriculum. In nearly every local providing advanced courses, the program is open to all craftsmen and classes are filled as requests for admission come into the union training department.

Although some information on the costs of these programs is presented in this study, detailed cost data were not readily available. This omission can be attributed, at least in part, to the frequent operation of apprenticeship and journeyman skill updating courses under a single training program.

A desire by unions and contractors to keep electricians and plumbers and pipefitters attuned with their technologically fast-moving industries is the main motivation behind skill improvement training. When the National Joint Pipefitter Apprenticeship Committee on March 30, 1960, increased the classroom training requirement for pipefitter and steamfitter apprentices from 144 to 216 hours, the committee cited new technological advances in its industry as the reason. Glass and plastic pipe installing, silver soldering in large pneumatic control devices, and inert-gas shielded arc welding are examples of this new technology, and the plumber and pipefitter journeymen need to train for such operations as much as the apprentices. Similarly, the IBEW maintains that the "heart of automation" lies in the electrical industry, and its officers realize that journeyman training must reach a level at which it can keep the craftsmen familiar with the new and changing working methods in cable splicing, welding, and electronics. The programs in the IBEW and the Plumbers and Pipefitters union designed to meet these training objectives are described in the following sections.[3]

Program of the IBEW

The IBEW skill improvement program was initiated by the international union (771,000 members) as a pilot project in August 1959. The National Electrical Contractors Association (NECA) supports the Electrical Brotherhood's training programs for construction apprentices through a joint apprenticeship training committee, but the union's officers believed that the need for an international journeyman training program extended beyond the electrical construction industry. Manufacturing and utility companies (not members of the NECA) required updated journeymen as much as electrical contractors. The need for advanced courses in 1959 had become so acute that the international unilaterally began to develop craftsman training without waiting until joint financing with employers could be arranged. NECA did inform the electrical con-

[3] An agreement between the IBEW and International Good Music, Inc., to retrain displaced broadcasting employees is not discussed in this study but should be noted. Under this agreement, employees displaced by automated equipment can receive educational training or retraining from established schools. A fund of 5 percent of the sale or lease price of any IGM equipment which displaced any worker, when supplemented by Federal funds under the George-Barden Act, the Smith-Hughes Act, and the National Defense Education Act of 1958, is estimated to exceed $500,000.

tractors of the journeyman courses and aided the international in publicizing the updating program. But the funds for developing the journeyman courses came from the international.

The union's training director studied several IBEW local journeyman updating programs for course material and teaching methods which could have general applicability to an international training program. He found that, in most cases, the locals had training programs consisting of little more than a course outline, reference books, and a "good teacher," and decided that the international would have to rely largely on the resources of its training department for the development of course materials in industrial electronics.

The 2-year course subsequently developed by the international for the locals was divided into four 18-week semester units. To complete a unit, a student was required to attend a 3-hour session 1 night a week and to pass written examinations before moving to the next unit. Graduation certificates signified the completion of the course and, hopefully, served as passports to better jobs. The international provided the workbooks and instructor manuals for the courses; the students paid $15 to $20 for their own laboratory and textbook supplies; and the locals furnished the instructors and classrooms. Enrollment was voluntary, and the classes were filled with the earliest applicants.

A later course, in "soldering techniques for the missile age," was designed to train journeymen in the skills necessary to the installation and servicing of electronic components in both industrial and military establishments. The course consists of 3-hour sessions 1 night a week for 5 weeks. The materials furnished by the international and the costs to the student are similar to those of the industrial electronics course and to those of a third course in cable splicing.

Since 1959, 150 local unions have enrolled over 15,000 journeymen in the three IBEW courses and the international anticipates that by January 1962, over 20,000 journeymen will be attending evening skill improvement classes. Although the international has plans to develop an enlarged updating program,[4] the IBEW intends to build the training program slowly until a larger number of locals request the international to expand the project or until joint contractor-union financial arrangements are made.

Many IBEW locals with jurisdiction in areas of flourishing construction activity have needed more extensive training programs than the international now can provide. The international points to Local 25, a 1,000-member union with jurisdiction in Nassau and Suffolk Counties on Long Island, as an impressive example of a local with an advanced training program in an area of expanding construction activity.

Skill Improvement in Local 25. Journeyman training in Local 25 did not become a permanent program until 1950, when the outbreak of hostilities in Korea and the ensuing defense buildup brought a considerable influx of new industrial and construction activities to Nassau and Suffolk Counties and created serious shortages of skilled labor. Contractors who employed the local's members lacked trained foremen for electrical construction teams (even third- and fourth-year apprentices held foremen jobs during this period), and they made numerous complaints that the local failed to supply them with enough trained supervisors. Some of the complaints were directed toward experienced foremen who had not kept abreast of the latest technological developments in electronics and new methods of installing home and industrial electrical appliances. This criticism spurred the local to establish, in the summer of 1952, a foreman training program. The membership, informed through union meetings of the officers' desires to conduct foreman training agreed to underwrite the program's cost. The lectures prepared by the local's education department for the first class of 10 students in 1952 were later developed into a comprehensive 2-year course which in 1960 trained enough supervisors for every type of foreman job. By provision of the 1958 contract, foreman training costs were assumed by the local joint apprenticeship and training committee.

After the 1930 depression years, Local 25 enjoyed a reasonably steady increase in employment until 1950, when a marked jump upward in the amount of construction work and changes in electrical skills made obvious to many contractors and union members the need for journeyman skill improvement programs. Aluminum welding of large aluminum buses (conductors), modern meth-

[4] A recently prepared orientation course ,designed to dispel the common fears of working in atomic energy plants, will substantially add to the skill improvement curriculum.

ods of mounting and installing electrical fixtures, and the many other new electrical operations used in construction work put a great pressure on the electrical contractors to promote these programs. The Industrial Stabilization Board, composed of a public chairman and equal numbers of representatives of the Nassau and Suffolk County chapters of the National Electrical Contractors Association and of Local 25, was organized in 1950 to deal with problems such as trained manpower The board established a training fund in 1955, to which contractors agreed to contribute one-fourth percent of the annual union wages and the local agreed to contribute one-fourth percent of its annual dues.

In 1955, the board spent $1,645 for a journeyman refresher course in the following subjects:

Cable splicing—eight 2-hour sessions
Industrial electronics—ten 2-hour sessions
Motor control—five 2-hour sessions
National electric code—eight 2-hour sessions
Oil burner control—four 2-hour sessions
Plan reading—ten 2-hour sessions
Precision pipe bending—eight 2-hour sessions

Eight companies contributed instructional materials, films, and teaching personnel. (The companies were not members of the NECA.) There were sufficient classrooms and instructors to accommodate 78 men in the first course; several times that number had applied for the classes.

By 1960, in response to the requests of journeymen and contractors, the Industrial Stabilization Board had increased the amount spent for journeyman training to $9,000 a year. Total training expense for 1960–61 was $47,158.83. The 1960 curriculum included:

Cable splicing—40 hours
Elementary electronics—50 hours
Foreman training—75 hours
Precision pipe bending—50 hours
Rigging—30 hours

The joint apprenticeship and training committee (set up by the Industrial Stabilization Board) selects the instructors for these courses, and the local's education department, working with area contractors, determines the curriculum. Courses are taught in a large union building with nearly half of its space occupied by classrooms. The 20 teachers are paid double the journeyman hourly rate. Between 1961 and 1970, the training program is expected to expand considerably. Within the next year, the local plans to develop course material in new techniques of pole line installation and welding. A new welding shop containing five combination arc and heliarc welding units, costing $1,200 each, is scheduled to be built in 1962. During the first year, electrical services, rent, and equipment are expected to amount to $13,500. A new 36-week welding course, consisting of three equal periods of training in electric arc, heliarc, and semiautomatic welding,[5] will be offered to journeymen free of charge and will be conducted 1 night a week in 3-hour sessions.

Today the program encompasses a broad range of general skills, but it is adaptable to updating journeymen's competence in specific electrical operations in immediate demand as well as to teaching specific skills that are expected to be in demand. Unfortunately, the training of men for skills they may use in tomorrow's electrical construction cannot, because of the absence of detailed manpower projections, be closely geared to the future need for electrical skills. "Nonmethodical, semi-intuitive foresight" has been used to characterize the type of planning underlying this aspect of the local's training program. The union's business manager says he would like to be able to plan better for future skills. He cites the following example as typical of the present type of planning.

Officials of Local 25 recently noted that public utility companies on Long Island, employing underground high-voltage cables, required a unique type of splicing called "oil-o-static." No demands for the new oil-o-static splicing had come before the local, but in anticipation of its future use by other companies, the local arranged a course in the new skill. In August 1961, three men traveled to the Okonite Co. in New Jersey for oil-o-static splicing instruction. The company provided the instructor for $500; the total cost to the local joint apprenticeship and training committee was $1,209. Upon completion of the training, a course in oil-o-static splicing was added to the skill improvement curriculum and the newly trained journeymen were used as instructors.

Changes in welding techniques have affected more than one union in the construction industry. Sheet-metal workers, and even bricklayers, are beginning to realize that if they cannot use the

[5] A heliarc welder passes an electric arc through tungsten electrodes, shielding the arc from the air with argon gas, and thereby produces a spatterless, quick weld. Other arc welders use a variation of this method.

new heliarc or plastic welding methods, their job jurisdiction may be challenged by unorganized "technicians" or by other craft unions. Changes in welding techniques have particularly affected members of the Plumbers and Pipefitters union, whose program to keep their journeymen abreast of technological change is examined in the following section.

Plumbing and Pipefitting Union

Journeyman classes in the Plumbers and Pipefitters union (251,000 members) grew out of local, 5-year apprenticeship programs as new techniques in construction, particularly in welding, left experienced craftsmen behind the younger apprentices in some areas. In recent years, the journeymen have tended to respond to the "new apprentice" by urging their locals to provide journeyman instruction in the union apprenticeship schools. Often the classrooms, instructors, and training equipment of the apprentices are used for these journeyman courses until separate or expanded facilities can be justified before the local joint apprenticeship committee.

In 1955, recognizing the need for a permanent international union program to assist locals with their expanding apprentice and journeyman training activities, the Plumbers and Pipefitters union enlarged its training department. Two years later, the department constructed a model classroom at the union's headquarters in Washington, D.C. The teaching equipment in the classroom includes plastic-welding instruments, a large pneumatic control panel, an open heating and cooling system, typical draining systems, and other specially constructed visual aids to suggest to the union instructor various methods of teaching difficult new techniques. Periodic invitations are sent to the instructors to visit the headquarters for model classroom instruction and individual inspections of the training equipment, and local unions frequently send their newly appointed instructors to the international for orientation in the use of various teaching methods.

The international's training department concentrates on developing instructional material, short courses, and visual aids for assisting the apprentice and journeyman teacher. The assumption that "if the instructor is good, his course will be good" underlies most of the department's activity. The material aids the instructor in deciding what facts he will cover, how he will stimulate the students' interest, and what new skills he will teach. Recognizing that the journeyman or apprentice instructor is generally a craftsman himself, chosen by the local joint committee because of his skill as a journeyman regardless of his lack of experience in education, the training department identifies its first objective as that of assisting the instructor with his classwork.

Purdue Teacher Training. In 1954, the training department invited 76 local instructors to Purdue University to attend a week-long session of training for teaching. Since that year, some 400 apprentice and journeyman teachers have attended the 1-week instructor training programs held each August. Classes in subjects such as inert-gas shielded arc welding, steam trap operations, steam and refrigeration cycles, the principles of pneumatic controls, plastic pipe welding, lead work, hydraulics, water contamination, water supply systems, and safety controls for heating and cooling systems are taught by industry-provided instructors. Staff members from the Purdue Industrial Education Department teach basic scientific theories and introduce the trainees to many of the visual and other teaching aids. The total cost to the union, including amounts spent on a pipefitter and plumber apprentice contest held concurrently with the instructor training, has averaged approximately $80,000 per session.

International Training Fund. In 1956, by agreement between the Plumbers and the National Constructors' Association (NCA), the International Training Fund (ITF) for skill development of journeymen and apprentices was established to permit the expansion of local union educational programs. The NCA agreed to contribute 2½ cents per man-hour to supplement the funds of local joint committees for educational equipment and instructors' salaries, and the jointly managed fund awards the grants to local joint committees. Once financial assistance has been offered, an ITF coordinator regularly inspects a training program to make certain it maintains the standards set by the international union, to see that the grants are used for the purposes allocated, and to offer sug-

gestions for improving the local's training activities. Since 1956, the ITF has given over $3 million to 307 out of the industry's 650 joint committees for training.

Types of Grants. In one instance, a joint journeyman training committee recognized a need for advanced training in control panel work. (Control panels are used to regulate numerous manufacturing operations, and several companies making controls employed most of the local's membership.) As evidence of the interest in such a course, the local filed with the ITF a list of over 100 men who wanted to study pipefitting operations in control panels, along with its request for eight control panel boards costing $1,100 each and 100 copies of the international journeyman textbook on control panel work. The control companies provided an instructor for the 17-week course held in the local vocational school, and the ITF appropriated $9,050 for equipment.

Another case involved an area in need of gas welders. The local joint committee could supply oxyacetylene stations and pay a portion of an instructor's salary for a journeyman welding class but needed assistance in purchasing pipefittings, silver solder, flux, tools, and epuipment. The ITF coordinators studied the local's request and granted $1,550 to the committee.

In still another case, a joint committee requested funds to establish journeyman courses in refrigeration and welding. The local union had just built a union hall with a basement designed for shop training. After the facilities had been inspected by an ITF coordinator, $8,500 was granted for the purchase of two multiduty welders, two Lincoln ideal arc–300-ampere welders, six welding and cutting outfits, one York trainer, and various tools, materials, and textbooks. When the program, which progressed well in the first year, needed additional funds, $4,700 was granted for more capital equipment, tools, materials, and supplies.

Local Union Welding Classes. In the classroom of the local union, the instructor depends heavily on the guides prepared by the international's training department. These include a detailed course outline, class time schedules, and complete answers to most of the questions likely to trouble the union instructor. The subjects include arc welding, pneumatic controls, industrial instruments and control piping, and refrigeration and air conditioning. Unfortunately, they do not yet encompass many of the specific skills demanded of today's plumbers and pipefitters.

As in the IBEW, locals of the Plumbers and Pipefitters union have developed their own updating programs emphasizing general courses, but the programs can be adapted to training men in a specific operation. For example, in early 1961, the 1,000-member Steam and General Pipefitters Local 438 in Baltimore was called upon for six men to handle an aircomatic welding device to weld 9-foot pipe for a 35-mile waterline from the Susquehanna River to Baltimore. Aircomatic, or shielded inert-gas metal-arc welding, known for its clean and fast weld, was developed for atomic energy plants and had never been used in Baltimore. The project's contractor, the North American Welding Co., requested the union-operated training school to arrange a course for six experienced welders in the shielded arc welding process. The company paid the regular wages of the journeymen during the training, and the Air Reduction Co.—manufacturers of the aircomatic equipment—furnished an instructor and an aircomatic gun for the course. After 40 hours of training the six men were certified to work on the company's pipe.

The union officers, realizing that the next demands for arc welders could come from companies less willing to provide ad hoc training, began a shielded arc welding course (2-hour sessions 2 nights a week) on a permanent basis.

In 1956, the Mechanical Contractors Association of Maryland established, jointly with the local, a training fund consisting of employer contributions of 2 cents per man-hour. This fund covered the cost of 4 heliarc and 14 oxyacetylene units, plastic welding equipment, and numerous books on welding that were bought for the school. Two welding and four theory instructors, selected by the joint committee on the basis of aptitude tests, interviews, and grade transcripts from their most recent schools, ran continuous classes for journeymen. In 1959 and 1960, over $106,000 was spent for the apprentice and journeyman welding school.

Applications for these classes in welding have always been more numerous than the places available. To select a recent example, on June 20,

1961, 28 places were open to journeymen for instruction in oxyacetylene and heliarc welding. The new heliarc welding method is used primarily at missile sites and atomic energy plants, where cleanliness is essential, although many contractors in Baltimore are discovering its efficiency for all types of welds. Fifty-eight men had to be placed on the waiting list for the heliarc class and another 50 had to wait for the oxyacetylene instruction. The total number wishing to participate in this single welding class represented nearly 13 percent of the union membership.

In January 1961, the following courses were open to journeymen: oxyacetylene, electric, or heliarc welding; blueprint reading and mathematics; pneumatic controls; and refrigeration.

Future of Skill Improvement Training

The skill improvement programs for craftsman electricians and plumbers and pipefitters are offshoots of the historically developed apprenticeship system of the two trade unions and the construction industry. The years of apprenticeship training in these two unions make it natural for the development of the journeymen advanced training to move along these same union-oriented lines in the future.

Perhaps the greatest shortcoming of the skill upgrading courses has been the lack of funds, facilities, and instructors to train all those who have applied for journeyman courses. Not only are there insufficient "crash classes" in specific new skills, there is a shortage of general skill courses. Both the IBEW and the Plumbers and Pipefitters union are hopeful that they will be able to eliminate this inadequacy, to improve the quality of the advanced training offered, and to direct it more closely to the changing needs of the industries in which their members are employed. But assistance in training from sources outside the joint committees is needed. As detailed projections of national and area manpower needs are developed and the experiences of other training and retraining programs become available, the task of keeping journeymen abreast of a changing trade through skill improvement should become easier.

Summaries of Studies and Reports

Technology and Productivity in Bituminous Coal, 1949–59[1]

SINCE 1949, the bituminous coal industry has engaged in a rapid modernization program in an attempt to improve its competitive position in postwar energy markets. A consequence of these efforts has been an impressive increase in output per man-hour and, conversely, a sharp reduction in labor requirements per ton.

In spite of the importance of this basic industry, it shared little of the general prosperity of the 1950's. While industrial output and employment rose, coal production had a downward trend and employment fell almost continuously. Falling demand for coal was due largely to technological changes in other industries; changes that altered fuel consumption patterns forced coal out of several of its major markets and hampered its growth in those that were retained. For example, dieselization of the railroads wiped out their demand for coal as a fuel for motive power. The welded-steel pipeline and the resultant intercontinental transportation of petroleum and natural gas were responsible for substantial losses in the retail market which includes space heating. At the same time, increases in combustion efficiency, which allowed more energy to be secured from a ton of coal, dampened the demand for coal in markets where there was little competition from other fuels. Simultaneously, less fuel energy was required per unit of goods and services produced as a result of changes in the organization of industrial production.

While the demand for coal was falling rapidly, the capacity to produce coal was falling much more slowly. The selling price of coal remained almost constant, but the prices of materials, supplies, labor, and other input factors were rising sharply. Profits, although fluctuating widely from year to year, were also in a generally downward trend. Against this background of falling demand and rising production costs, the coal industry, with full support of the United Mine Workers of America (Ind.), intensified a mechanization program that had begun many years before. A variety of new machines were developed and introduced along with appropriate new mining techniques. Concurrently, the industry made other changes, such as internal reorganization of some of the larger coal producing companies and the expansion of cooperative membership organizations including those engaged in market and industrial research and development.

The result of these combined efforts was an 85-percent increase in output per production worker man-hour in the decade following 1949. The average annual rate of increase of 6.4 percent was more than double the rate of any previous decade.[2] In terms of output per all-employee man-hour, the rise was only slightly less.

The dramatic rise in output per man-hour in bituminous coal mining stands out when compared with changes that occurred in the rest of the economy. Between 1949 and 1959, the rise in output per man-hour of all employees in bituminous coal advanced twice as fast as in the total private economy and almost three times as fast as in the nonfarm sector. While increases as large as that in mining are often recorded in newly developing industries, they are seldom attained by those that have reached maturity. They are, however, invariably accompanied by problems as well as benefits.

As production declined and unit labor requirements were reduced, employment fell sharply. The average number of production workers in the industry fell by three-fifths, to less than 150,000 in 1959. This decline left the industry with only one-fourth as many workers as were employed during 1923, the alltime high of bituminous coal

[1] This article is based on *Technological Change and Productivity in the Bituminous Coal Industry, 1920–59*, BLS Bull. 1305 (1961).

[2] Based on the least squares method of computation.

employment. One result of this contraction of the work force was an increase in the average age of employed mineworkers. According to records of the Bureau of Old-Age and Survivors Insurance, the median age of coal miners in 1957 was 42 years compared with 37 years in U.S. industry as a whole.

Mechanization of bituminous coal mining also significantly changed the job structure and the work involved in mining. Increasing proportions of mineworkers were employed, particularly after World War II, in administrative, professional, and clerical jobs, in processing work above ground, and in maintenance, transportation, and supervision underground rather than in direct production at the face of the coal seam.

Factors in Increasing Production

Changes in output per man-hour reflect many interrelated factors including, in addition to changes in the extent of mechanization, changes in the proportions of coal mined in underground and surface mines, the physical conditions of resources mined at different times, the rate of capacity utilization, and labor skills.

Increased Plant and Equipment Per Worker. An overall measure of mechanization is difficult to obtain. One indicator is the increase of the real value of plant and equipment per worker. According to estimates, the net value in constant dollars of plant and equipment [3] per worker in the bituminous coal industry increased at an average annual rate of 10 percent a year between 1948 and 1958—a rate unprecedented in the history of the industry. (See table 1.) At the same time, the number of production workers fell sharply, indicating that changes during the decade involved innovations with substantial laborsaving potentials.

The rapid pace of mechanization in recent years is also indicated by the increase in installed horsepower per worker between the years 1939 and 1954. The 240-percent increase over these 15 years was greater than the total increase recorded in the previous 30 years. Similarly, the use of electric energy per worker rose 175 percent between 1939 and 1954 after growing very slowly between 1929 and 1939.

Mechanization. The growth of mechanical mining methods after World War II carried forward a process of mechanization which began in the 1870's when the coal-cutting machine first replaced the miner's pickaxe. Thereafter, mechanization followed the usual sequence of coal mining operations—drilling, blasting, cutting, loading.

Changes in underground technology were the basis for most of the postwar increase in output per man-hour. Changes in surface mining, together with the increasing proportion of coal produced in surface mines, accounted for a smaller amount of the postwar increase. It is estimated that about 5 percent of the labor savings (changes in man-day requirements per ton) between 1949 and 1959 resulted from surface mining operations.

Probably the most far-reaching development in underground mining technology during the postwar period was the continuous mining machine. This machine integrates cutting and loading into a single continuous operation with a minimum of human intervention and eliminates drilling and blasting. The chief economic advantage of the continuous mining machine is its laborsaving capacity. A crew in a typical continuous mining unit is 20 to 30 percent smaller than a crew using conventional mechanized equipment. In 1959, mines using continuous mining machines exclusively produced 24 percent more tons per man-day than mines using conventional loading equipment and 144 percent more than the outdated hand-loaded pits.

The use of continuous mining machines grew rapidly. In 1959, 776 machines in operation mined 23 percent of all underground bituminous coal, compared with less than 3 percent in 1952, the first year of separate record. While the use of these machines is expected to continue expanding, there will be limiting factors. Among these are the availability of coal resources to which continuous mining techniques may be adapted or, conversely, the development of machines capable

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[3] Gross value of mine structures and equipment less depreciation. Data for 1948 are from Israel Borenstein, *Capital and Output Trends in Mining Industries, 1870-1948* (New York, National Bureau of Economic Research, Inc., Occasional Paper 45, 1954). Data for 1953 and 1958 were estimated by the Bureau of Labor Statistics, using Borenstein's methods and sources. In 1929 dollars, the net value per worker was $1,267 in 1948 and $3,276 in 1958. The estimated gross value of plant, equipment, and coal resources (at historical cost before depreciation) per production worker was estimated at more than $13,000 in 1958.

The rate of change was derived by the compound interest method.

TABLE 1. PLANT AND EQUIPMENT PER PRODUCTION WORKER IN THE BITUMINOUS COAL INDUSTRY, SELECTED YEARS

Year	Index of plant and equipment in 1929 dollars (1929=100)	Average annual percent change [1]
1870	36.4	
1880	24.1	−4.0
1889	39.0	+5.5
1909	81.4	+3.7
1919	106.0	+2.7
1929	100.0	−.6
1939	69.8	−3.5
1948	83.1	+2.0
1953	145.8	+11.9
1958	214.8	+8.1 } 10.0

[1] Average annual rates of change from the preceding date derived by the compound interest method.

SOURCE: For 1870 to 1948, Israel Borenstein, *Capital and Output Trends in Mining Industries, 1870–1948* (New York, National Bureau of Economic Research, Inc., Occasional Paper 45, 1954); for 1953 and 1958, estimates by the Bureau of Labor Statistics using National Bureau of Economics Research methods and sources.

of operating in thin or highly pitched seams. Other limiting factors will be the high cost of the machines (which currently averages $70,000) and the availability of capital funds in the industry.

Another impressive aspect of mine mechanization was the development and rapid installation of mechanical loading equipment, virtually eliminating the hand shovel in underground mines, where the bulk of coal is still mined. First used in the 1920's, mechanical loading accounted for 67 percent of all bituminous coal mined underground in 1949 and over 90 percent in 1960. Since almost 60 percent of total labor in a hand-loaded mine is required for loading operations, the mechanization of loading had an important impact on labor requirements per ton of coal mined.

The high capacity of the loading machines required improvements in underground transportation. More mechanical conveyors and torque convertor shuttle cars were needed to move the coal from the working face fast enough for the loading machines to operate near capacity. Between 1949 and 1959, the total mileage of conveyors for gathering and hauling almost doubled, and mines using such conveyors increased their output from 21 to 45 percent of total underground coal production. Other improvements in transportation included faster and more powerful locomotives, mine cars of greater capacity, automatic dumping devices, and heavier rails.

In surface mines, which account for 31 percent of all bituminous coal mined, some of the world's largest land-based machines scrape away the crust of the earth to expose the coal seam. Smaller machines then cut and load the coal for transportation to the processing plants. This process has always been mechanical, utilizing conventional earth-moving machinery (draglines, shovels, trucks) and a minimum of human labor. While some new machinery was introduced after the war, developments have consisted primarily of increases in the capacity and changes in the motive power of the machines.

The postwar period saw the introduction of shovels with dipper capacities up to 180 cubic yards; the top capacity was 30 yards in the 1930's. Beginnings were also made with machinery especially designed for removing the overburden (dirt, rock, etc.) from strip coal. One such machine is the wheel excavator, a series of whirling buckets capable of moving 3,000 cubic yards of overburden an hour for a distance of more than 300 feet. Another especially designed surface mining machine is the coal auger, which is used in hill country where thickness of the overburden makes conventional strip mining uneconomical. A recently introduced auger, costing $1.5 million, can bore 1,000 feet into an embankment, is run by a single man seated at an electronic control panel outside the mine, and has a capacity of 3,000 tons daily under favorable conditions. These, however, are design capacities of the most advanced machines in the industry; the capacity of machines in general use does not approach these levels.

Increased Coal Processing. Mechanical mining increased the amount of refuse mined with the coal. A ton of coal mined in 1959 contained 20 percent more refuse than a ton mined a decade earlier. At the same time, consumers were demanding higher quality and greater purity of product. These pressures combined to increase the need for coal processing—cleaning, crushing, dust treating, and drying.

A rapid increase in coal processing is indicated by changes in the proportions of all coal passing through different processes. Between 1949 and 1959, the proportion of all coal crushed more than doubled, and the percent cleaned and dust treated increased, respectively, by 87 and 40 percent.

Labor Requirements. As previously indicated, these technological changes have been accom-

TABLE 2. OUTPUT, EMPLOYMENT, AND INDEXES OF MAN-HOURS, OUTPUT PER MAN-HOUR, AND MAN-HOURS REQUIRED PER TON IN THE BITUMINOUS COAL INDUSTRY, SELECTED YEARS

Year	Output [1] (millions of tons)	Employment		Indexes (1947=100)				
				Production workers [2]			All employees	
		All employees (thousands)	Production workers [2] (thousands)	Man-hours	Output per man-hour	Man-hours required per ton	Output per man-hour	Man-hours required per ton
1923	520	----	643.2	----	----	----	----	----
1947	631	425.6	402.1	100.0	100.0	100.0	100.0	100.0
1948	600	436.1	410.8	94.9	100.0	100.0	99.3	100.7
1949	438	393.3	367.8	66.4	104.4	95.8	100.7	99.3
1950	516	367.9	343.7	71.5	114.5	87.3	111.6	89.6
1951	534	372.0	348.0	74.3	113.8	87.8	111.3	89.8
1952	467	327.8	304.4	61.5	120.1	83.2	115.8	86.4
1953	457	288.9	267.5	56.1	129.0	77.5	124.6	80.3
1954	392	228.5	209.0	41.6	149.2	67.1	141.0	70.9
1955	465	218.7	200.5	46.0	159.9	62.5	153.3	65.2
1956	501	228.6	208.8	48.3	164.3	60.9	157.4	63.5
1957	493	230.0	208.4	46.7	166.9	59.9	158.1	63.3
1958	410	195.2	173.8	36.2	179.2	55.8	164.7	60.7
1959	412	168.1	149.2	33.7	193.3	51.7	178.5	56.0

[1] Includes all coal mined in the United States except Pennsylvania anthracite and Texas lignite.
[2] Includes working foremen and all nonsupervisory workers.

SOURCE: Derived from output data from the Bureau of Mines, U.S. Department of the Interior, and employment and hours data from the Bureau of Labor Statistics. For production workers, hours are average weekly hours paid for, adjusted to exclude travel time; for nonproduction workers, hours were assumed to be 40 a week throughout the period.

panied by impressive increases in tonnage per man-hour or, inversely, decreases in hourly labor requirements per ton. A ton of coal mined in 1959 required 48 percent less production labor than a ton mined in 1949 (table 2).

It is emphasized that the changes in productivity described are averages, reflecting differences among mines, methods of production, and levels of mechanization, etc. Many individual mines, especially the smaller hand-loaded mines, did not approach average gains.

Employment Conditions

Declining employment opportunities and widespread unemployment were cardinal problems facing mine workers during the postwar period. In 1949, 393,300 workers (production and nonproduction) were employed in bituminous coal mines. By 1951, employment had fallen 5 percent and was below its depression low point of 1932. By 1959, the number had fallen still further—to 168,100—60 percent below 1949. This decline was contracyclical, as the economy as a whole was periodically setting new records of employment.

In March 1957, the Department of Labor estimated the unemployment rate among bituminous coal workers at two-thirds greater than the rate of the workers in all U.S. industry, 50 percent greater than in manufacturing, and 30 percent greater than the average for all mining industries.[4] The rate of unemployment at mines in West Virginia, for example, reached 20 percent, about twice the average for other industries in the State.

Many factors have served to intensify the reemployment problems of miners. Coal mining towns are usually isolated from industrial and trading centers, and the scarcity of job opportunities and retraining programs further limit occupational mobility. These factors, coupled with the high average age of displaced miners and the widespread assumptions that mining skills are not easily transferred, have served to strengthen barriers to reemployment.

The earnings of production workers in coal mines rose steadily after World War II, climbing from an average of $1.94 in 1949 to $3.25 per hour in 1959, when the average workweek (36.4 hours) was nearly 4 hours longer than in the earlier year. Although hourly earnings in bituminous coal mining in 1959 were almost 50 percent greater than the average in manufacturing, weekly earnings were only one-third greater. Annual earnings, according to Unemployment Insurance and OASDI records, were less than 10 percent greater than the average in manufacturing. Supplements to wages for welfare purposes increased by two-

[4] See *Monthly Report on the Characteristics of the Insured Unemployed, March 1957* (U.S. Department of Labor, U-14), table A-1.

thirds between 1949 and 1959, when they amounted to 17 percent of total labor compensation. The financing of these benefits by employer contributions based on tonnage produced was a unique development in welfare benefit financing.

Technological developments also played a major role, together with mine legislation and intensified safety education, in effecting a substantial reduction in the hazards of mining coal. Both fatal and nonfatal injury rates in mining between 1947 and 1959 were reduced by about one-fourth. Major disasters in coal mining were less frequent in the 1950's than in any previous decade.

Unit Costs, Prices, Profits

Between 1949 and 1959, estimated employee compensation per man-hour (including wages and salaries and supplementary wage benefits) rose 64 percent. However, because labor requirements per ton were declining at the same time, employment costs per ton fell 7 percent.[5]

Data from the Census of Minerals Industries also show employment costs decreasing relative to other production costs (table 3). From 1939 to 1958 (the only census dates available that encompass most of the 1949–59 decade), employment costs fell from 69 percent of the value of a ton of coal at the mines to 51 percent. At the same time, material costs rose from 16 to 25 percent, and other costs from 15 to 24 percent of the total value.[6] Fragmentary data based on corporate income tax returns show that interest charges and depreciation per dollar of real corporate sales increased more than 200 percent in the postwar period. This high rate of increase, however, reflects not only increased fixed costs arising from the purchase of new tools of production but also a sharp decline in sales.

TABLE 3. DISTRIBUTION OF TOTAL PRODUCTION COSTS IN THE BITUMINOUS COAL INDUSTRY, BY TYPE OF COST, SELECTED YEARS

Type of cost	1929	1939	1954	1958
Average value per ton shipped	100.0	100.0	100.0	100.0
Employment costs per ton	66.5	68.6	57.3	51.0
Material and other costs per ton	33.5	31.4	42.7	49.0
Material cost per ton	15.4	16.2	24.5	24.7
Other costs per ton	18.2	15.1	18.2	24.3

NOTE: These estimates have been computed primarily from data shown in the Census of Mineral Industries, 1954 and 1958, Bureau of the Census. In deriving employment cost per ton, census data on wages and salaries have been adjusted by the use of national income data to derive a ratio of wages and salaries to total compensation to permit inclusion of estimated supplementary payments. Data on "other costs per ton" are a residual, after deducting employment and material cost per ton from average value per ton shipped.

While these changes in costs were occurring, the average value of a ton of coal at the mines declined slightly, from $4.88 in 1949 to $4.77 in 1959. Compared with prices of other fuels, coal prices were relatively stable. Profits of the bituminous coal industry continued to be relatively low. Between 1949 and 1958, the average return after taxes on sales of all bituminous coal corporations fell from 3.0 percent to 1.1 percent. Again, these are averages; many larger corporations showed high returns, whereas a large number of the smaller ones, probably not able to take advantage of modern machinery and techniques, operated in the red. Despite the decline in average profits, the industry's record represented an improvement over the prewar period when bituminous output was also declining.

Outlook for the 1960's

Increased research for new methods of producing and using coal is being sponsored by both industry and Government. Establishment of an Office of Coal Research in the U.S. Department of the Interior in 1960 marked a new phase in efforts to expand future markets for coal. Among the more important potential developments in the industry view are low temperature carbonization, hydrogenation, remote control continuous mining, improved coal pipelines, and coal-fired turbines.

Cooperative efforts to expand coal sales, production, and productivity are being increased by labor, management, and other groups interested in the coal industry. The National Coal Policy Conference, Inc., composed of coal companies, the UMWA, coal-carrying railroads, electric utility companies, and coal equipment manufacturers, was organized to advance the interests of the industry. In a step almost unique in United States unions, the UMWA in April 1957 established a Research and Marketing Department.

[5] Original data on employee compensation are from *U.S. Income and Output, 1958* and *Survey of Current Business, National Income Supplement, July 1961* (U.S. Department of Commerce, Office of Business Economics).

[6] These shifts occurred over a 19-year period; average annual rates of change computed from census data for 1954 and 1958 indicate that the pace of change was most rapid in the last decade.

Coal production is expected to rise substantially above 1959 output, according to a number of industry experts. Underlying the anticipated growth are forecasts of rising demand for coal and relatively stable coal prices. Increased consumption of coal will result primarily from the rising demand for electricity and the growing importance of coal in generating electric power. Lesser increases are forecast for other industrial uses, largely in the manufacture of iron and steel. Major reductions in coal consumption are not foreseen because railroads and residential heating have almost completely converted to other fuels, and atomic energy is not expected to become fully competitive for generating electric power before 1975. Stable prices are predicted on the basis of steady unit labor costs arising from increases in output per man-hour, reduced transportation costs because of increased competition among carriers, and pressures for price increases by the oil and natural gas industries.

Output per man-hour is expected by many authorities to continue to rise, although probably at a slower rate than in the 1950's. In underground mining, substantial gains are expected as continuous mining machines are adapted to thin seams, hauling is further mechanized, and new mines designed for mechanical mining are opened. The near universality of mechanical loading installations, on the other hand, eliminates an important source of productivity gain. In surface mining, moderate advances are likely, as larger and more specialized equipment is utilized; the shift from underground to surface operations, significant in raising industry productivity in the past, is likely to be slow.

The outlook for employment implied by the estimates of coal production and output per man-hour is toward stabilization or a small increase. The number of mineworkers employed in 1975 will be no higher than it was in 1959 if coal production matches the increase expected in gross national product and coal productivity slows to its long-term rate of growth.

Unemployment will likely continue to be a serious problem in coal mining areas until new jobs in other industries are provided for miners now displaced and for those who will be displaced as older mines are abandoned.

—ROBERT T. ADAMS
Division of Productivity and Technological Developments

Earnings of Communications Workers in October 1960

AVERAGE EARNINGS of the 658,003 employees (excluding officials and managerial assistants) of the Nation's principal communications carriers rose by 5.0 percent between October 1959 and October 1960—from $2.42 to $2.54 an hour.[1] The average for October 1960 was 105 percent above the level of hourly earnings ($1.24) for October 1947, the date of the first annual study of communications workers' earnings made by the Bureau of Labor Statistics in cooperation with the Federal Communications Commission.

Employment in October 1960 of the four main groups of communications carriers studied was less than 1 percent below that reported a year earlier, but 9 percent below the peak employment year of 1957. Class A telephone carriers and Western Union's wire-telegraph operations reported small employment decreases between 1959 and 1960, but the other two groups—radiotelegraph and ocean-cable carriers—reported small increases in employment.

Class A Telephone Carriers

Earnings in 1960. Earnings of the 620,368 employees (excluding officials and managerial assistants) of the 51 class A telephone carriers covered by the study averaged $2.55 an hour in October 1960, 4.9 percent above the October 1959 average of $2.43. Individual earnings were widely dispersed, owing in part to the great diversity of skills and responsibilities required by the industry, pay differences among regions and among establishments within the same regions, and the practice, followed by most companies, of providing a range of rates for workers in a

[1] Based on annual reports filed with the Federal Communications Commission by carriers engaged in interstate or foreign communications by means of their own facilities or through connections with the facilities of another carrier under direct or indirect common control. These reports do not include radiotelegraph and ocean-cable carriers with annual operating revenues below $50,000 or telephone carriers with annual operating revenues below $250,000. A more comprehensive account of the 1960 study, including earnings data for additional occupations, will be presented in BLS Bull. 1306. It is estimated that this study covers nearly nine-tenths of the workers in the communications industries. The earnings data contained in the summary, which pertain to all workers except officials and managerial assistants, were computed by dividing scheduled weekly compensation by scheduled weekly hours. For a summary of the Bureau's study of communications workers' earnings in October 1959, see *Monthly Labor Review*, September 1960, pp. 946-951.

given job and locality. The middle half of the workers earned between $1.77 and $3.05 an hour in October 1960. Hourly earnings ranged from an average of $1.46 for trainee telephone operators to $4.77 for professional and semiprofessional employees.

Women accounted for approximately three-fifths of the total class A telephone carrier work force. Experienced switchboard operators, virtually all women and comprising about 22 percent of the total employment, averaged $1.83 an hour, and switchboard operators in training averaged $1.46. Nonsupervisory clerical employees (113,503 women and 8,593 men) averaged $1.98 an hour.

Construction, installation, and maintenance employees, accounting for about three-tenths of the total work force, were virtually all men. Average hourly earnings for numerically important occupations in these departments were $3.04 for exchange repairmen, $2.98 for test-board men and repeatermen, $2.92 for cable splicers, $2.91 for PBX and station installers, $2.86 for central office repairmen, and $2.50 for linemen.

Regionally, average earnings for all employees, except officials and managerial assistants, ranged from $2.70 an hour in the Middle Atlantic region to $2.21 an hour in the Southeast region (table 1). Occupational averages were most frequently highest in the Middle Atlantic region and lowest in the Southeast, Mountain, and North Central regions. The following tabulation indicates the relationship of occupational averages for three numerically important occupational groups among the various regions.

	Average hourly earnings as a percent of national occupational average		
	Nonsupervisory clerical employees	*Experienced switchboard operators*	*Central office repairmen*
New England	96	102	103
Middle Atlantic	102	106	105
Great Lakes	102	104	100
Chesapeake	100	98	101
Southeast	93	85	94
North Central	89	89	101
South Central	95	96	99
Mountain	91	95	91
Pacific	106	107	100

TABLE 1. CLASS A TELEPHONE CARRIERS:[1] AVERAGE HOURLY EARNINGS[2] OF EMPLOYEES IN SELECTED OCCUPATIONS, BY REGION,[3] OCTOBER 1960

Occupational group	United States[4]		New England		Middle Atlantic		Great Lakes		Chesapeake	
	Number of workers	Average hourly earnings[2]	Number of workers	Average hourly earnings[2]	Number of workers	Average hourly earnings[2]	Number of workers	Average hourly earnings[2]	Number of workers	Average hourly earnings[2]
All employees except officials and managerial assistants	620,368	$2.55	46,276	$2.55	132,457	$2.70	111,046	$2.62	32,398	$2.52
Cable splicers	16,151	2.92	1,244	2.99	3,093	3.10	2,925	2.96	961	2.96
Cable splicers' helpers	3,886	2.01	333	1.91	1,180	2.11	777	1.97	285	2.15
Central office repairmen	34,983	2.86	2,169	2.94	7,720	3.01	6,284	2.87	1,714	2.89
Clerical (nonsupervisory)	122,096	1.98	9,206	1.91	28,571	2.02	21,106	2.01	5,734	1.98
Exchange repairmen	12,878	3.04	579	3.13	3,577	3.11	3,869	3.05	393	3.06
Experienced switchboard operators	139,302	1.83	11,219	1.87	30,368	1.94	24,227	1.90	8,105	1.79
Linemen	15,697	2.50	964	2.56	3,249	2.75	2,691	2.55	954	2.29
Mechanics, building and motor-vehicle service	3,227	2.78	209	2.68	929	2.80	687	2.89	162	2.59
PBX and station installers	25,944	2.91	763	2.94	8,455	3.03	6,729	2.91	573	2.70
Test-board men and repeatermen	15,149	2.98	616	3.10	1,518	3.20	1,826	3.06	389	3.06

Occupational group	Southeast		North Central		South Central		Mountain		Pacific	
	Number of workers	Average hourly earnings[2]	Number of workers	Average hourly earnings[2]	Number of workers	Average hourly earnings[2]	Number of workers	Average hourly earnings[2]	Number of workers	Average hourly earnings[2]
All employees except officials and managerial assistants	69,701	$2.21	23,926	$2.31	58,322	$2.31	26,968	$2.34	86,211	$2.68
Cable splicers	2,139	2.81	646	2.62	1,293	2.90	786	2.59	2,584	2.95
Cable splicers' helpers	309	1.93	5	1.67	585	2.02	146	1.89	77	2.22
Central office repairmen	3,558	2.70	731	2.89	3,084	2.83	1,243	2.60	5,020	2.85
Clerical (nonsupervisory)	12,447	1.84	4,351	1.77	10,370	1.89	5,295	1.80	18,265	2.09
Exchange repairmen	1	1.63			1,565	3.03	374	2.82	2,401	2.98
Experienced switchboard operators	17,055	1.56	5,514	1.63	16,600	1.75	5,554	1.74	14,774	1.96
Linemen	1,574	2.32	828	2.16	2,184	2.45	993	2.18	1,734	2.09
Mechanics, building and motor-vehicle service	466	2.55	67	2.80	112	2.96	54	2.32	498	2.90
PBX and station installers	115	1.86	14	2.06	3,289	2.90	917	2.68	4,840	2.85
Test-board men and repeatermen	1,279	2.88	361	2.92	1,451	2.97	501	2.88	2,952	2.98

[1] Covers telephone carriers with annual operating revenues exceeding $250,000.

[2] Average hourly earnings were computed by dividing total scheduled weekly compensation by total scheduled weekly hours.

[3] The regions used in this study include: *New England*—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; *Middle Atlantic*—Delaware, New Jersey, New York, and Pennsylvania; *Great Lakes*—Illinois, Indiana, Michigan, Ohio, and Wisconsin; *Chesapeake*—District of Columbia, Maryland, Virginia, and West Virginia; *Southeast*—Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee; *North Central*—Iowa, Minnesota, Nebraska, North Dakota, and South Dakota; *South Central*—Arkansas, Kansas, Missouri, Oklahoma, and Texas (except El Paso County); *Mountain*—Arizona, Colorado, Idaho (south of Salmon River), Montana, Nevada, New Mexico, Texas (El Paso County), Utah, and Wyoming and *Pacific*—California, Idaho (north of Salmon River), Oregon, and Washington.

[4] Figures include long-lines employees and class A telephone carrier employees in Hawaii and Puerto Rico. Alaska had no class A telephone carriers reporting to the Federal Communications Commission.

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TABLE 2. WESTERN UNION TELEGRAPH CO.: PERCENTAGE DISTRIBUTION OF WIRE-TELEGRAPH EMPLOYEES BY STRAIGHT-TIME AVERAGE HOURLY EARNINGS,[1] SELECTED OCCUPATIONS, OCTOBER 1960

Average hourly earnings [1]	All employees except messengers [2]	Clerical employees nonsupervisory	Experienced telegraph operators (except Morse)		Laborers	Linemen and cablemen	Morse operators	Subscribers' equipment maintainers	Telephone operators	Messengers, foot and bicycle	Messengers, motor
			Commercial department	Traffic department							
$1.00 and under $1.10										70.1	
$1.10 and under $1.30										29.9	10.5
$1.30 and under $1.50	0.2										.2
$1.50 and under $1.70	5.5	5.4	18.3	4.3	3.4				7.8		15.2
$1.70 and under $1.90	9.1	12.3	25.7	3.8	18.4				10.0		23.5
$1.90 and under $2.10	11.7	18.8	25.7	6.2	21.7	5.8	5.3	1.0	9.8		49.8
$2.10 and under $2.30	27.9	30.3	30.0	83.1	1.4	8.7	66.7	17.1	72.4		.9
$2.30 and under $2.50	13.3	13.4	.3	2.6	2.9	24.4	28.0	20.0			
$2.50 and under $2.70	10.6	7.9	.1	(3)	40.6	30.9		47.8			
$2.70 and under $2.90	7.5	3.7			11.6	17.4		14.2			
$2.90 and under $3.10	3.8	4.3				12.8					
$3.10 and under $3.30	1.4	1.8									
$3.30 and under $3.50	1.6	.7									
$3.50 and over	7.4	1.5									
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	27,042	5,885	2,690	2,131	207	745	375	982	1,781	3,798	1,482
Average hourly earnings [1]	$2.44	$2.23	$1.93	$2.14	$2.27	$2.56	$2.28	$2.58	$2.08	$1.12	$1.82

[1] Excludes premium pay for overtime and for work on weekends, holidays, and late shifts.
[2] Excludes officials and managerial assistants and ocean-cable employees. Data for the latter are incorporated in table 4.
[3] Less than 0.05 percent.
NOTE: Because of rounding, sums of individual items may not equal 100.

Average earnings of employees of Bell System companies, accounting for 96 percent of the class A telephone carrier employees covered by the study, exceeded the average for non-Bell employees by 66 cents an hour—$2.57 compared with $1.91. Differences in the occupational makeup of Bell and non-Bell carriers and in the size of firm and of community contributed toward the difference in wage levels. Bell System carriers, for example, had a larger proportion of their employees in clerical, sales, and professional occupations. Employment in 9 of the 23 Bell System companies exceeded 25,000, while only 9 of the 28 non-Bell companies employed as many as 1,500 workers. For each of the occupational groups studied separately, average hourly earnings of Bell System employees were substantially higher than those in non-Bell companies. However, the average scheduled workweek was longer by about 1½ hours in the non-Bell companies.

The rate of pay of an individual employee was also influenced considerably by his length of service with the company. Length-of-service wage adjustments typically provided a range of rates for each job in which the top rate was as much as 100 percent above the beginning rate. Thus, for linemen, the highest rate exceeded the lowest rate by more than $1 an hour in 35 of the 51 class A telephone carriers.

Trends in Employment and Earnings. Total employment of class A telephone carriers increased from 552,700 in 1947 to a peak of 681,600 in 1957, and then declined by 1960 to 620,400. Much of the decrease over the past 3 years has come from a substantial decline (43,700, to a total of 192,000) in the number of telephone operators, caused chiefly by the installation of new and improved equipment. From the following tabulation, it will be noted that telephone operators outnumbered construction, installation, and maintenance employees by a ratio of 2 to 1 in 1947, but that the ratio is now less than 8 to 7.

	Percent of total employment in—				
	Oct. 1947	Oct. 1953	Oct. 1957	Oct. 1959	Oct. 1960
Telephone operators	46	43	35	32	31
Clerical employees, nonsupervisory	16	18	19	19	20
Construction, installation, and maintenance employees	23	23	27	28	28
Other	15	16	19	21	21
All employees, except officials and managerial assistants (thousands)	552.7	610.6	681.6	621.3	620.4

The change in the occupational composition since 1947 has increased the proportion of men employees in the industry—from about a third of

total employment in 1947 to slightly more than two-fifths in 1960. These changes have had a significant impact on the overall earnings level of the industry. It is estimated that 22 cents of the $1.29 increase in average hourly earnings between October 1947 and October 1960 is the result of changes in the occupational composition of the industry.[2]

The level of wages in the telephone industry has increased substantially over the past 13 years. Average hourly earnings for all employees increased by 4.9 percent between October 1959 and October 1960 (from $2.43 to $2.55) and by 102 percent in the 13-year period from October 1947 (from $1.26 to $2.55). The tabulation below shows for major occupational groups the increases in average earnings that occurred between 1947 and 1960:

	Average hourly earnings		*Amount of increase*	
	Oct. 1947	*Oct. 1960*	*Cents*	*Percent*
Experienced switchboard operators	$0.97	$1.83	86	89
Cable splicers' helpers	1.02	2.01	99	97
Clerical employees, nonsupervisory	1.13	1.98	85	75
Linemen	1.18	2.50	132	112
PBX and station installers	1.44	2.91	147	102
Cable splicers	1.61	2.92	131	81

Western Union Telegraph

Straight-time hourly rates of pay for the 27,042 nonmessenger employees[3] of Western Union's wire-telegraph operations averaged $2.44 in October 1960, an increase of 6.6 percent above the average recorded a year earlier ($2.29). The 5,280 messengers averaged $1.35 an hour, an increase of 7.1 percent since October 1959.

Wage rates for employees of Western Union are determined by labor-management agreements with the Commercial Telegraphers' Union (AFL–CIO) in all cities except the New York Metropolitan area, where contractual agreements are with the American Communications Association (Ind.). Cities under contract with the CTU are classified in several groups on the basis of revenue and/or message load for wage determination purposes. Established rates of pay for most occupational classifications vary somewhat according to these city-size groupings. However, uniform rates apply to some jobs, particularly plant workmen, and foot and bicycle messengers. Occupational rates of pay in the New York area are generally similar to those established for cities in the highest pay classification provided under the terms of the CTU agreement.[4]

Wage provisions contained in agreements with both the CTU and ACA include established rate ranges for all occupations, with differences between the starting and maximum rates amounting to as much as 50 cents an hour for some classifications. Advancement from the starting rate through the various progression steps to the maximum rate is automatic for employees meeting the requirements of the job after specified periods of service.[5] The starting rate for foot and bicycle messengers at the time of the study was $1.05, with 24 months of service required to advance to the maximum rate of $1.21.

Among the nonmessenger employees, men and women were employed in nearly equal numbers (14,350 men and 12,692 women), but tended to be concentrated in different occupational categories. Numerically important occupational categories in which women predominated were nonsupervisory clerical employees, experienced telegraph operators (except Morse operators) in the commercial department and the traffic department, and telephone operators. Among the jobs predominantly held by men were linemen and cablemen, and subscribers' equipment maintainers. Their average straight-time hourly rates of pay are shown in table 2.

For most of the occupational categories, the hourly rates of the highest paid workers exceeded those of the lowest paid in the same job by more than $1 an hour. However, in some jobs, individual rates were closely grouped; for example, the hourly rates of two-thirds or more of the route-aides, experienced telegraph operators (except Morse operators) in the traffic department, Morse operators, telephone operators, and building service employees (except mechanics) fell within 20-cent-an-hour ranges.

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[2] Weighting occupational averages for October 1960 by employment for October 1947 results in an average of $2.33 an hour instead of $2.55.

[3] Excludes officials and managerial assistants, and ocean-cable employees.

[4] Information on the company's wage structure was obtained from an analysis of the current contracts with the two unions. Copies of these contracts are on file with the Bureau of Labor Statistics.

[5] The length of time required to advance to the maximum rate varies by occupation; for example, 36 months for motor messengers, 60 months for telephone operators (at larger offices), and 72 months for certain technicians in the operating and plant departments.

Messengers, nearly all males and comprising about 16 percent of Western Union's wire-telegraph work force, included 3,603 full-time and 1,677 part-time employees. Their average straight-time hourly rates of pay were $1.39 and $1.13, respectively. Foot and bicycle messengers averaged $1.12 an hour, 6 cents above the average for October 1959; motor messengers averaged $1.82, 12 cents above the previous year. As indicated earlier, individual rates of pay for foot and bicycle messengers fell within a range for initial and maximum rates from $1.05 and $1.21 an hour; about half of the motor messengers had rates between $1.90 and $2.10 an hour.

Straight-time rates of pay for nonmessenger employees of Western Union's wire-telegraph operations rose 132 percent between October 1947 and October 1960. The occupational wage relationships during this period remained generally similar on a cents-per-hour basis, but percentage increases in average rates of pay tend to be greater for the lower paid groups. To illustrate, average rates of pay increased 110 percent for subscribers' equipment maintainers and 113 percent for linemen and cablemen, compared with increases of 138 percent for experienced telegraph operators (except Morse operators) in the commercial department and 145 percent for telephone operators. The increase in average rates of pay for foot and bicycle messengers, was considerably below that recorded for other occupational groups, amounting to 47 cents, or 72 percent, since October 1947; the increase for motor messengers amounted to 95 cents, or 109 percent.

During the past 13 years, total employment of the wire-telegraph operations decreased 39 percent. The following tabulation for numerically important occupational groups indicates the considerable change which took place in occupational composition since 1947:

	Percent of total employment in—				
	Oct. 1947	*Oct. 1952*	*Oct. 1957*	*Oct. 1959*	*Oct. 1960*
Telegraph operators	34	32	30	28	28
Messengers, foot and bicycle	18	19	14	12	12
Messengers, motor	3	3	4	4	4
Clerical employees, nonsupervisory	16	16	18	18	18
Construction, installation, and maintenance employees	13	13	16	18	18
Other	16	17	18	20	20
All employees except officials and managerial assistants (thousands)	53.1	39.5	36.2	32.8	32.3

For nonmessenger employees, changes in the occupational composition of the work force have been accountable for approximately 12 cents [6] of the

[6] Weighting current occupational averages by the occupational employment for October 1947 results in an average of $2.32 an hour for nonmessenger employees instead of $2.44.

TABLE 3. PRINCIPAL RADIOTELEGRAPH CARRIERS: [1] PERCENTAGE DISTRIBUTION OF EMPLOYEES BY AVERAGE HOURLY EARNINGS, [2] SELECTED OCCUPATIONS, OCTOBER 1960

Average hourly earnings [3]	All employees except officials and managerial assistants [2]	Clerical employees, nonsupervisory	Marine coastal station operators	Mechanics and maintenance technicians	Messengers, foot and bicycle	Radio operating technicians	Radio operators	Teletype-multiplex operators
$1.00 and under $1.10	3.5				30.9			
$1.10 and under $1.30	5.2				46.2			
$1.30 and under $1.50	2.7	1.2			19.6			
$1.50 and under $1.70	1.0	2.4			2.9			
$1.70 and under $1.90	3.8	9.8			.5	1.3		2.6
$1.90 and under $2.10	4.8	13.4				.3		2.8
$2.10 and under $2.30	7.3	16.6		1.8		1.0		13.2
$2.30 and under $2.50	7.6	12.0		3.1		.7	2.0	17.2
$2.50 and under $2.70	8.8	10.4	29.2	8.8		8.3	3.3	16.8
$2.70 and under $2.90	8.0	13.9	13.1	4.4		7.0		10.3
$2.90 and under $3.10	7.4	8.8	15.3	16.7		9.3	3.3	6.1
$3.10 and under $3.30	12.2	7.4	24.8	14.1		14.6	73.7	24.7
$3.30 and under $3.50	8.5	2.2	8.8	46.7		19.6	5.3	6.5
$3.50 and over	19.2	2.0	8.8	4.4		37.9	12.5	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of workers	3,946	971	137	227	444	301	152	507
Average hourly earnings [3]	$2.84	$2.44	$3.00	$3.18	$1.21	$3.25	$3.24	$2.57

[1] Covers radiotelegraph carriers with annual operating revenues exceeding $50,000.

[2] See footnote 2, table 1.

[3] Excludes employees working for radiotelegraph carriers outside the 48 conterminous States and the District of Columbia.

NOTE: Because of rounding, sums of individual items may not equal 100.

TABLE 4. PRINCIPAL OCEAN-CABLE CARRIERS:[1] PERCENTAGE DISTRIBUTION OF EMPLOYEES BY AVERAGE HOURLY EARNINGS,[2] SELECTED OCCUPATIONS, OCTOBER 1960

Average hourly earnings [2]	All employees except officials and managerial assistants [3]	Cable operators	Clerical employees, nonsupervisory	Messengers, foot and bicycle	Teletype-multiplex operators
$1.00 and under $1.10	3.9	---	---	32.7	---
$1.10 and under $1.30	7.1	---	---	59.9	---
$1.30 and under $1.50	.4	---	0.4	1.9	---
$1.50 and under $1.70	2.1	---	4.8	3.7	---
$1.70 and under $1.90	3.1	---	5.2	---	1.7
$1.90 and under $2.10	6.1	---	9.8	.6	16.5
$2.10 and under $2.30	10.6	---	16.3	.6	20.7
$2.30 and under $2.50	9.1	---	14.0	.6	21.5
$2.50 and under $2.70	11.0	---	15.5	---	25.6
$2.70 and under $2.90	13.0	17.0	20.5	---	14.0
$2.90 and under $3.10	6.9	4.5	8.2	---	---
$3.10 and under $3.30	10.2	78.4	2.7	---	---
$3.30 and under $3.50	5.8	---	1.3	---	---
$3.50 and over	10.7	---	1.3	---	---
Total	100.0	100.0	100.0	100.0	100.0
Number of workers	1,367	88	478	162	121
Average hourly earnings [3]	$2.68	$3.06	$2.47	$1.19	$2.37

[1] Covers ocean-cable carriers with annual operating revenues exceeding $50,000; includes ocean-cable employees of Western Union Telegraph Co.
[2] See footnote 2, table 1.
[3] Excludes employees working for ocean-cable carriers outside the 48 conterminous States and the District of Columbia.

NOTE: Because of rounding, sums of individual items may not equal 100.

$1.39 increase in average hourly rates of pay between 1947 and 1960.

Radiotelegraph Carriers

Earnings of employees[7] of the five companies engaged in transmitting nonvocal radio communications averaged $2.84 an hour in October 1960. This represents an increase of 5.6 percent above the October 1959 average ($2.69) and 101 percent above the average recorded in October 1947 ($1.41). Men comprised over four-fifths of the 3,946 radiotelegraph employees covered by the study.

Average hourly earnings for numerically important occupational groups are shown in table 3. These groups accounted for approximately two-thirds of the total radiotelegraph work force. Since October 1959, increases in average hourly earnings for these groups ranged from 3 cents for foot and bicycle messengers to 17 cents for radio operators.

Individual earnings of the radiotelegraph employees covered by the study were widely dispersed—the earnings of the middle half of the workers ranged from $2.21 to $3.36 an hour. However, among some of the occupational groups, individual earnings were concentrated within comparatively narrow limits. For example, approximately three-fourths of the foot and bicycle messengers, radio operators, and telephone operators earned between $1 and $1.30, $3.10 and $3.30, and $2.70 and $3.10 an hour, respectively.

Radiotelegraph carrier employment in October 1960 was 1.5 percent higher than in October 1959, but was approximately 22 percent below the October 1947 level.

Ocean-Cable Carriers

Earnings of the 1,367 workers[8] employed by the three ocean-cable carriers covered by the study averaged $2.68 an hour in October 1960, an increase of 4.7 percent above the previous year's average ($2.56) and 79 percent above the average recorded in October 1947 ($1.50). Men accounted for over four-fifths of the total ocean-cable carrier employment (1,156 men and 211 women).

Numerically important occupational groups and their average hourly earnings are found in table 4. Those occupations, together with mechanics employed in construction, installation, maintenance, and other technical work (averaging $3.18 an hour), accounted for about 70 percent of the total work force. Foot and bicycle messengers had the same average hourly earnings in both October 1959 and October 1960, but earnings for the other occupational groups increased from 5 cents for mechanics to 16 cents for cable operators.

Total ocean-cable carrier employment rose slightly during the October 1959–October 1960 period; however, since October 1947, employment has declined by about 7 percent, from 1,475 to 1,367.

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[7] Excludes officials and managerial assistants and employees working outside the conterminous 48 States and the District of Columbia.
[8] Ibid.

Multiemployer Pension Plans Under Collective Bargaining—Part I

EDITOR'S NOTE.—*The following article was adapted from a chapter of a forthcoming Bureau of Labor Statistics report on the prevalence, benefits, protection, administrative provisions, and financial controls of multiemployer pension plans under collective bargaining. An article covering benefit provisions of such plans will appear in a later issue of the Review.*

SEVEN HUNDRED AND NINETY-EIGHT multiemployer pension plans under collective bargaining, covering 3.3 million workers, active and retired, were in effect in the spring of 1960. These plans accounted for almost a sixth of the estimated number of active and retired workers covered by all private pension plans, and about a third of the estimated number of workers under all collectively bargained plans.

Multiemployer pension plans are, on the whole, relatively young. Only 8 of the 736 plans in effect in spring 1960 for which the date of establishment is known were established prior to 1946 [1] (table 1). Seven percent of the plans, now covering over a fourth of the workers, were established before 1950. A spurt in the development of plans took place after 1954; thus about 60 percent of the plans were less than 6 years old in the spring of 1960.

It is estimated that the 3.3 million workers under all multiemployer pension plans represent roughly three-fifths of the estimated coverage of all multiemployer collective bargaining agreements (excluding railroads).

Scope and Method

The chief source of information was the reports and documents filed with the U.S. Department of Labor's Bureau of Labor Standards [2] pursuant to the Welfare and Pension Plans Disclosure Act, 1958 (Public Law 85-836), by plans covering over 25 workers. The forms filed by over 25,000 plans showed that they provided pension benefits or a combination of welfare and pension benefits. However, no information was available on the forms directly distinguishing multiemployer plans from single employer plans. Multiemployer pension plans are defined as those plans covering the employees of two or more financially unrelated employers. It was assumed that few multiemployer pension plans under collective bargaining are administered solely by an employer(s) or an employers association, and nearly 20,000 such plans were removed from consideration. The descriptions and supporting documents of the remaining 5,600 pension plans administered jointly or by an employee organization were examined to determine whether they were, in fact, multiemployer pension plans under collective bargaining. A comparison of the resulting list of plans with other sources revealed some omissions which were filled in by using the Bureau of Labor Standards' union index reference file. Multiemployer pension plans not under collective bargaining have been excluded from the study because of their unimportance in relation to the whole pension field at the present time.

Size of Plans

The 798 plans studied ranged in coverage from 26 to 250,000 active and retired workers (table 2). Although multiemployer plans are generally thought of as large-scale undertakings, 54 plans covered fewer than 100 workers each and 230 plans had from 100 to 499 workers. Plans with fewer than 5,000 workers comprised almost nine-tenths of the plans and nearly a fourth of the workers. On the other hand, the six largest plans, each with over 100,000 workers, covered almost a third of all workers under multiemployer plans. These six plans were as follows: United Mine Workers of America Welfare and Retirement Fund; Central States, Southeast and Southwest Areas Pension Fund (Teamsters); The Amalgamated Insurance Fund-Pension Fund (Clothing Workers); Amalgamated Cotton Garment and Allied Industries Retirement Fund (Clothing Workers); Western Conference of Teamsters Pension Fund; and International Brotherhood of Electrical Workers Pension Benefit Trust Fund. Slightly more than a third of the workers were attached to 46 plans with coverage ranging from 10,000 to 100,000 workers.

[1] Pension plans established prior to this date are exempt from certain requirements of the Labor Management Relations Act, 1947.

[2] The assistance and cooperation of the Bureau of Labor Standards in the selection of the plans and other aspects of this project are gratefully acknowleged by the Bureau of Labor Statistics.

TABLE 1. MULTIEMPLOYER PENSION PLANS UNDER COLLECTIVE BARGAINING, BY DATE OF ESTABLISHMENT, SPRING 1960

Date of establishment	Plans	Number of workers [1] (thousands)	Date of establishment	Plans	Number of workers [1] (thousands)
All plans	798	3,324.8	1951	30	179.8
			1952	30	87.5
1943	2	44.1	1953	66	207.6
1944	4	8.5	1954	48	86.9
1945	2	173.9	1955	85	564.6
1946	5	420.8	1956	108	243.8
1947	5	109.9	1957	130	310.9
1948	16	48.0	1958	86	159.3
1949	19	95.8	1959	38	100.2
1950	62	363.9	Information not available	62	119.2

[1] Worker coverage includes both active and retired workers in 1959.

NOTE: Because of rounding, sums of individual items may not equal totals.

Industry and Union Representation

More than three-fifths of the plans, with 2 million workers, were in nonmanufacturing industries, and over one-third of the plans, with about 1.3 million workers, were in manufacturing (table 3). Thirteen plans involved both manufacturing and nonmanufacturing establishments.

The dispersion of multiemployer plans by industry follows the pattern of multiemployer collective bargaining relationships.[3] Major groupings of covered workers were found in food and apparel among manufacturing industries, and in construction, motor transportation, mining, and trade among nonmanufacturing industries. Nearly three-fourths of all plans, covering five-sixths of the workers, were in these industries. Although only 1 out of 10 plans was in the apparel industries, these plans included almost 1 out of 4 of the workers covered by all plans. The construction industry, which had 1 out of 3 plans, covered only 1 out of 5 workers. The food and trade industries also had smaller than average plans, so that with 11.0 and 11.9 percent of the plans they only covered 6.9 and 9.3 percent of the workers, respectively. Owing to very large national and regional plans in the coal mining and motor transportation industries, the proportion of workers covered was much greater than the proportion of plans in these industries.

The only other industries with a significant number of multiemployer plans and workers covered, relative to total industry employment, were water transportation, printing and publishing, and motion pictures and recreation. No multiemployer plans were found in certain industries, such as petroleum, communications, and public utilities, where multiemployer bargaining is uncommon, but the incidence of single employer pension plans is high. Similarly, among metalworking industries, where at least 2.5 million workers were covered by pension plans under collective bargaining, only about 57,000 were covered by multiemployer pension plans under collective bargaining.

Members of 71 national and international unions were covered by the 798 multiemployer plans (table 4). The Teamsters had the largest number of individual plans (121), about 15 percent of the total with almost 20 percent of the worker coverage. These plans were concentrated primarily in motor transportation, food manufacturing, and wholesale and retail trade industries. The International Ladies' Garment Workers and the Amalgamated Clothing Workers, which accounted for virtually all plan coverage in the apparel industry, had 62 plans comprising over 20 percent of the workers. These three unions plus the Carpenters, Electrical Workers (IBEW) (with plans primarily in the construction industry), and United Mine Workers (excluding District 50) had about a third of the plans covering almost two-thirds of all workers. Each of these six unions participated in plans with a total coverage of more than 100,000 workers, and with the exception of the Carpenters, each of the unions had at least one plan covering more than 50,000 workers.

TABLE 2. MULTIEMPLOYER PENSION PLANS UNDER COLLECTIVE BARGAINING, BY NUMBER OF WORKERS COVERED, SPRING 1960

Number of workers covered	Plans	Workers [1] (thousands)	Percent	
			Plans	Workers
All plans	798	3,324.8	100.0	100.0
Under 100	54	3.3	6.8	0.1
100 and under 500	230	59.2	28.8	1.8
500 and under 1,000	154	108.8	19.3	3.3
1,000 and under 5,000	257	599.8	32.2	18.0
5,000 and under 10,000	51	354.0	6.4	10.6
10,000 and under 25,000	29	407.6	3.6	12.3
25,000 and under 50,000	15	540.5	1.9	16.3
50,000 and under 100,000	2	195.0	.3	5.9
100,000 and over	6	1,056.7	.8	31.8

[1] Worker coverage includes both active and retired workers in 1959.

NOTE: Because of rounding, sums of individual items may not equal totals.

[3] See "Characteristics of Major Union Contracts," *Monthly Labor Review*, July 1956, pp. 805-811.

TABLE 3. MULTIEMPLOYER PENSION PLANS UNDER COLLECTIVE BARGAINING, BY INDUSTRY GROUP, SPRING 1960

Industry	Plans	Workers [1] (thousands)	Percent	
			Plans	Workers
All industries	798	3,324.8	100.0	100.0
Manufacturing	286	1,261.0	35.8	37.9
Food and kindred products	88	230.5	11.0	6.9
Apparel and other finished textile products	84	778.9	10.5	23.4
Printing, publishing, and allied industries	55	63.8	6.9	1.9
Leather and leather products	6	24.2	.8	.7
Metalworking	28	57.1	3.5	1.7
Other manufacturing	25	106.5	3.1	3.2
Nonmanufacturing	499	2,041.8	62.5	61.4
Mining	4	295.4	0.5	8.9
Contract construction	262	653.8	32.8	19.7
Motor transportation	48	500.1	6.0	15.0
Water transportation	41	147.6	5.1	4.4
Wholesale and retail trade	95	308.7	11.9	9.3
Services	28	79.1	3.5	2.4
Motion pictures and recreation	18	55.0	2.3	1.7
Other nonmanufacturing	3	2.1	.4	.1
Interindustry manufacturing and nonmanufacturing	13	22.0	1.6	.7

[1] Worker coverage includes both active and retired workers in 1959.

NOTE: Because of rounding, sums of individual items may not equal totals

The unions ordinarily associated with the construction industry had a high degree of participation in multiemployer plans. In addition to the Carpenters and the Electrical Workers (IBEW), they included the Asbestos Workers, Bricklayers, Hod Carriers, Painters, Plasterers, Plumbers and Pipefitters, and Sheet Metal Workers. All or most of the plans in which these unions participated (with the exception of the Carpenters and the Electrical Workers) had fewer than 5,000 workers per plan. In the maritime industry, where a high degree of unionization is also found, the Longshoremen (on both coasts), the Maritime, the Marine Engineers, and the Masters, Mates and Pilots unions also had a high degree of participation in this type of plan.

Several unions in food manufacturing—the Brewery Workers and the two Bakery Workers unions (both the AFL–CIO affiliate and the independent union)—and in trade—the Retail Clerks, Hotel & Restaurant Employees, the Meat Cutters, and the Retail, Wholesale and Department Store Union—commonly negotiated multiemployer plans.

Twenty unions had only a single plan; in some cases, this plan covered as many workers as the union had members, including the Machine Printers (Ind.), the Newspaper and Mail Deliverers (Ind.), and the American Radio Association. Nearly the entire membership of some unions such as the International Ladies' Garment Workers, Amalgamated Clothing Workers, United Mine Workers (Ind.) excluding District 50, Maritime, and Marine Engineers belonged to multiemployer plans.[4] Between 20 and 75 percent of the members of several large unions—Teamsters (Ind.), both Bakery Workers unions, Longshoremen's Association, Carpenters, Electrical Workers (IBEW), Plumbers and Pipefitters, and Retail Clerks—were covered by such pension plans.

Some of the major unions in the country, particularly the Auto Workers, Steelworkers, Machinists, and Electrical Workers (IUE), had few or no members in multiemployer plans. Most of the members of these unions are covered by single employer collective bargaining agreements and pension plans.[5]

Although usually only one union participated in a plan, in 26 plans, covering over 110,000 workers, two or more international or national unions were involved. An example of such a plan is the Building Trades Pension Fund of Western Pennsylvania, in which the Bricklayers, Lathers, and Plasterers all participate.

Geographic Area

In almost 90 percent of the plans (699), covering 50 percent of the workers, all participating employers were located within a single State (table 5). These intrastate plans operated in 33 States and the District of Columbia. They were concentrated mainly in the Middle Atlantic and East North Central regions, particularly in New York, New Jersey, Pennsylvania, Illinois, Michigan, and Ohio. States outside these regions with substantial worker coverage included California and Missouri. In most cases, these intrastate plans were restricted to employers in a particular locality.

[4] For membership data, see *Directory of National and International Labor Unions in the United States, 1959*, BLS Bull. 1267, (1959).

[5] See *Digest of 100 Selected Pension Plans Under Collective Bargaining, Winter 1957–58*, BLS Bull. 1232 (1958). Since the analysis for the multiemployer study was completed, the Boilermakers, Operating Engineers, and Machinists have introduced national plans for participating locals. The benefits in these plans depend upon the instituted contribution rates which vary from employer to employer.

The 99 interstate plans included 56 plans with members in two or more States within a region and 43 with members in more than one region. The 43 interregional plans covered more than 45 percent of all workers in multiemployer plans. Some were national in scope (e.g., IBEW Pension Benefit Trust Fund); others covered large numbers of workers in more limited geographic areas (e.g., Western Conference of Teamsters Pension Fund, and some plans of the International Ladies' Garment Workers' Union and the Amalgamated Clothing Workers).

With the exception of the mining industry, the heaviest concentration of plans in each of the industries studied was in the Middle Atlantic region. The East North Central region had a substantial number of plans and workers covered in the food, printing, metalworking, construction, and motor transportation industries. The New England region had a large number of construction plans, while the Pacific region had a large number of workers in both construction and trade. In the South Atlantic region, a significant number of plans were in water transportation.

Most of the intrastate plans covered from 1,000 to 10,000 workers; in the Southern and Mountain States, few plans had over 5,000 workers. A majority of the interregional plans covered over 5,000 workers.

Worker Mobility

Transferability of Pension Rights. One of the distinguishing characteristics of multiemployer pension plans is that the worker remains covered and builds up service credits as long as he is employed by any one of the employer members. Single employer plans, on the other hand, do not permit continuance of pension coverage after a worker leaves the company.[6] The protection afforded by multiemployer plans, however, depends on the scope of plan coverage by occupation, industry, or geographic area. Nearly half of the workers in the spring of 1960 belonged to local plans covering

[6] However, the worker may be protected by a vesting provision and/or transferability to branches, plants, and subsidiaries of multiplant firms. See *Pension Plans Under Collective Bargaining: Part I—Vesting Provisions and Requirements for Early Retirement; Part II—Involuntary Retirement Provisions, Late 1958*, BLS Bull. 1259 (1959).

TABLE 4. NATIONAL AND INTERNATIONAL UNIONS [1] PARTICIPATING IN MULTIEMPLOYER PENSION PLANS,[2] BY NUMBER OF WORKERS COVERED, SPRING 1960

[Number of plans in parentheses]

100,000 workers and over

Carpenters (18)
Clothing (14)
Electrical (IBEW) (32)
Garments, Ladies' (48)
Mine (excluding District 50) (Ind.) (2)
Teamsters (Ind.) (121)

50,000 and under 100,000 workers

Bakery (Ind.) (8)
Hod Carriers (23)
Hotel (13)
Longshoremen (21)
Meat Cutters (31)
Plumbers (63)
Retail Clerks (11)

25,000 and under 50,000 workers

Bakery (5)
Building Service (8)
Engineers, Operating (18)
Iron (20)
Maritime (4)
Painters (23)
Retail, Wholesale (12)
Sheet Metal (24)
Upholsterers (1)

5,000 and under 25,000 workers

Actors (1)
Automobile (6)
Bookbinders (6)
Brewery (9)
Bricklayers (30)
Electrical (IUE) (3)
Furniture (6)
Hatters (23)
Lathers (5)
Leather Goods (5)
Longshoremen and Warehousemen (Ind.) (5)
Machinists (10)
Marine Engineers (3)
Masters, Mates (2)
Musicians (1)
Plasterers (8)
Printing Pressmen (14)
Pulp (6)
Shoe Workers, United (1)
Stage (13)
Toy Workers (1)
Textile Workers (TWUA) (1)
Typographical (13)

1,000 and under 5,000 workers

Asbestos (17)
Boilermakers (2)
Distillery (5)
Jewelry (1)
Leather Workers (1)
Lithographers (Ind.) (1)
Mine District 50 (Ind.) (3)
Newspaper Guild (2)
Newspaper and Mail Deliverers (Ind.) (1)
Pattern Makers (5)
Photo Engravers (4)
Roofers (4)
Stereotypers (3)
Watchmen's Association (Ind.) (3)

Fewer than 1,000 workers

Engineers, Technical (Ind.) (1)
Fireman and Oilers (1)
Garment, United (2)
Hosiery (1)
Machine Printers (Ind.) (1)
Mailers (Ind.) (2)
Marble (1)
Metal Polishers (1)
Office (2)
Radio (1)
Shoe and Boot Workers (1)
Telegraphers (1)
Textile Workers (UTWA) (1)

[1] All unions are affiliated with the AFL–CIO except those followed by (Ind.). For full union identification and addresses, see *Directory of National and International Labor Unions in the United States, 1959*, BLS Bull. 1267 (1959).

[2] Excluded from this list are 26 plans covering 110,000 workers which included members of 2 or more unions and 12 plans covering 13,000 workers which were negotiated by local Federal labor and industrial unions or unaffiliated local unions.

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a single craft, occupational group, or industry, about a fourth to regional plans (mostly covering an industry), and about a fourth to industrywide national plans.

The most limited type of multiemployer plan, and also the most prevalent, covered a particular craft or occupational group in a specific industry in a metropolitan area. Typically, multiemployer plans in the construction, dairy, and printing and publishing industries were of this kind. For example, in the construction industry in New York, separate pension plans had been established by the Painters, Carpenters, Sheet Metal Workers, etc.

Occupational mobility is furthered by plans such as those in the retail, apparel, and service industries, which covered workers with a wide variety of occupations and skills in an industry in a specified metropolitan area. The plan covering drug stores in New York City, for example, included a variety of occupational groups, although limited to workers represented by a single union (Local 1199, Retail Drug Employees Union). Also, a plan may include more than one union within its scope in an industry in a limited geographic area. For example, 10 unions participated in the plan covering hotels in New York City. A few plans included workers in more than one industry and occupation in a labor market area. The Northwest Ohio Area Industries–UAW Retirement Income Plan negotiated by the United Automobile Workers, for instance, covered about 2,000 workers employed by about 40 companies in a number of different industries.

In some occupations and industries, multiemployer pension programs cover an entire region or even the entire country. In the longshore industry on the West Coast, for example, a pension fund was established under a coastwise agreement between the Pacific Maritime Association and the International Longshoremen's and Warehousemen's Union (Ind.). The very nature of the water transportation industry virtually compels development of such plans. Similar regional plans were negotiated in the trucking and construction industries, but an even broader approach was found in the Western Conference of Teamsters Pension Fund. Not only can the worker move from employer to employer in the trucking industry in an 11-State area, but he can also move to

TABLE 5. MULTIEMPLOYER PENSION PLANS UNDER COLLECTIVE BARGAINING, BY REGION AND STATE, SPRING 1960

Region and State	Plans	Workers [1] (thousands)	Percent	
			Plans	Workers
All plans	798	3,324.8	100.0	100.0
Interregion	43	1,546.9	5.4	46.5
New England	58	52.8	7.3	1.6
Intraregion	5	7.7	0.6	0.2
Maine	1	[2]	.1	[2]
Vermont	1	1.9	.1	.1
Massachusetts	24	28.0	3.0	.8
Rhode Island	4	1.5	.5	[2]
Connecticut	23	13.7	2.9	.4
Middle Atlantic	417	1,040.1	52.3	31.3
Intraregion	37	125.3	4.6	3.8
New York	265	678.1	33.2	20.4
New Jersey	68	73.0	8.5	2.2
Pennsylvania	47	163.6	5.9	4.9
East North Central	122	220.6	15.3	6.6
Intraregion	2	1.1	0.3	[2]
Ohio	24	21.0	3.0	0.6
Indiana	6	5.9	.8	.2
Illinois	51	121.6	6.4	3.7
Michigan	31	62.5	3.9	1.9
Wisconsin	8	8.5	1.0	.3
West North Central	33	48.3	4.1	1.5
Minnesota	9	3.9	1.1	0.1
Iowa	1	.2	.1	[2]
Missouri	23	44.3	2.9	1.3
South Atlantic	36	38.8	4.5	1.2
Intraregion	10	12.3	1.3	0.4
Delaware	2	1.0	.3	[2]
Maryland	9	11.9	1.1	.4
District of Columbia	3	2.0	.4	.1
Virginia	4	5.7	.5	.2
West Virginia	2	2.5	.3	.1
North Carolina	2	2.0	.3	.1
Georgia	2	1.0	.3	[2]
Florida	2	.5	.3	[2]
East South Central	9	5.2	1.1	.2
Kentucky	4	3.0	0.5	0.1
Alabama	4	2.1	.5	.1
Mississippi	1	.1	.1	[2]
West South Central	9	26.7	1.1	.8
Louisiana	2	7.9	0.3	0.2
Texas	7	18.8	.9	.6
Mountain	3	5.0	.4	.2
Colorado	2	0.2	0.3	[2]
Nevada	1	4.9	.1	0.1
Pacific	68	340.4	8.5	10.2
Intraregion	2	19.8	0.3	0.6
Washington	5	2.4	.6	.1
California	59	317.5	7.4	9.6
Alaska	2	.6	.3	[2]

[1] Worker coverage includes both active and retired workers in 1959.
[2] Fewer than 50 workers.
[3] Less than 0.05 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

TABLE 6. BASIS OF EMPLOYER CONTRIBUTIONS IN MULTIEMPLOYER PENSION PLANS UNDER COLLECTIVE BARGAINING, SPRING 1960

Basis of employer contributions	Plans		Workers [1]	
	Number	Percent	Thousands	Percent
All formulated plans [2]	736	100.0	3,229.8	100.0
Time rate	434	59.0	1,535.2	47.5
Per hour worked	210	28.5	765.3	23.7
Per week	130	17.7	536.0	16.6
Per month	39	5.3	83.5	2.6
Per shift	28	3.8	31.9	1.0
Per day	27	3.7	118.6	3.7
Percent of earnings or payroll	169	23.0	1,146.2	35.5
Other	8	1.1	303.7	9.4
No contribution	4	.5	1.7	.1
Information not available	121	16.4	243.0	7.5

[1] Worker coverage includes both active and retired workers in 1959.
[2] Excludes 62 plans in the process of establishing plan provisions.

NOTE: Because of rounding, sums of individual items may not equal totals.

contributing employers in other industries in the area.

Nationwide mobility in certain industries was permitted by a few large plans, covering about a million workers. The UMWA Welfare and Retirement Fund covering virtually all workers under agreement in the bituminous coal industry is probably the best known example of this type of plan. Other national plans were formed by the Electrical Workers (IBEW), both Bakery Workers unions, the Amalgamated Clothing Workers, Furniture Workers, and the Upholsterers Union.

Reciprocity. The number and range of jobs to which a worker might transfer without loss of credited service was further broadened by 66 plans with reciprocity agreements with other multiemployer plans. Under these agreements, which cover about a fourth of the members of multiemployer plans, service under one plan is used to determine, in part, the benefits provided by another plan. All but five plans were limited to transfers among plans of the same union. Over half of the 66 plans were negotiated by the ILGWU, and they allowed virtually unlimited transfers of credits among them.

An additional 37 plans, covering about a tenth of the workers, gave power to the administrator to work out reciprocal arrangements with plans of their own union and, in 11 of these cases, other unions as well.

None of the plans with fewer than 100 members contained reciprocity provisions of any kind, although small plans presumably have the greatest need for such arrangements. While a number of plans in all other size categories has such provisions, the proportion was higher among the larger plans; 7 of the 23 plans covering 25,000 or more workers had reciprocity provisions, as compared with only 56 of the 411 plans with 500 to 5,000 workers.

Financing

Almost all multiemployer plans studied were financed entirely by employer contributions. Only 30 plans, covering slightly more than 60,000 workers, were employer-worker financed; 4 plans, covering less than 2,000 workers, were financed entirely by the worker.

In general, participating employers contributed to a central fund to provide benefits for covered workers. The individual employer's obligation [7] usually was fixed for the term of the collective bargaining agreement. Only rarely were the employers, individually or collectively, obligated to provide, as is customary in single-employer plans, specified types and levels of benefits.

Three out of five plans, with almost half of the workers, provided for a contribution rate based on the time worked by each employee covered by the plan (table 6). About 1 out of 4 plans, covering over a third of the workers, required the

TABLE 7. COMPOSITE HOURLY CONTRIBUTION RATE OF MULTIEMPLOYER PENSION PLANS UNDER COLLECTIVE BARGAINING, SPRING 1960

Rate per hour (composite) [1]	Plans		Workers [2]	
	Number	Percent	Thousands	Percent
All plans with rates based on time worked	434	100.0	1,535.2	100.0
Under 4.5 cents	33	7.6	89.2	5.8
4.5 cents and under 5.5 cents	50	11.5	81.6	5.3
5.5 cents and under 6.5 cents	21	4.8	65.2	4.2
6.5 cents and under 7.5 cents	23	5.3	71.9	4.7
7.5 cents and under 8.5 cents	53	12.2	150.9	9.8
8.5 cents and under 9.5 cents	12	2.8	37.5	2.4
9.5 cents and under 10.5 cents	110	25.3	676.0	44.0
10.5 cents and under 11.5 cents	8	1.8	16.1	1.0
11.5 cents and under 12.5 cents	10	2.3	12.8	.8
12.5 cents and under 13.5 cents	30	6.9	49.8	3.2
13.5 cents and under 14.5 cents	7	1.6	12.0	.8
14.5 cents and under 15.5 cents	31	7.1	55.0	3.6
15.5 cents and over	27	6.2	73.3	4.8
Information not available	19	4.4	143.9	9.4
Average [3]	9.7 cents per hour			

[1] See assumptions in text.
[2] Worker coverage includes both active and retired workers in 1959.
[3] Arithmetic mean, weighted by workers covered.

NOTE: Because of rounding, sums of individual items may not equal totals.

[7] Some plans had different contribution rates for employers covered by the same plan.

TABLE 8. PERCENTAGE CONTRIBUTION RATE OF MULTIEMPLOYER PENSION PLANS UNDER COLLECTIVE BARGAINING, SPRING 1960

Percent of earnings or payroll	Plans		Workers [1]	
	Number	Percent	Thousands	Percent
All plans specifying contribution	169	100.0	1,146.2	100.0
1 and under 2 percent	19	11.2	212.0	18.5
2 and under 3 percent	37	21.9	322.6	28.1
3 and under 4 percent	63	37.3	420.1	36.7
4 and under 5 percent	18	10.7	119.5	10.4
5 and under 6 percent	12	7.1	32.5	2.8
6 percent and over	4	2.4	7.2	.6
Information not available	16	9.5	32.1	2.8
Average [2]	2.8 percent			

[1] Worker coverage includes both active and retired workers in 1959.
[2] Arithmetic mean, weighted by workers covered.

NOTE: Because of rounding, sums of individual items may not equal totals.

employer to contribute a fixed percentage of each employee's earnings or of the payroll as a whole. A few plans established other methods of building up pension fund reserves.

Contributions Based on Time Worked. Half the plans with contributions based on some time unit of work used hours actually worked, almost one-third used the workweek, while the remaining plans used days, shifts, or months worked. Many plans based the employer's obligation on the number of employees actually on the payroll for a specified number of hours, not necessarily the full period. Thus, in some plans, the full employer's contribution would be payable if the worker were employed a minimum number of hours—usually much less than the full-time period. In other plans, especially those on a weekly basis, the employer's contribution was proportionate to the hours worked, usually up to a specified maximum contribution.

A composite distribution of the 434 plans specifying a contribution rate based on time worked is presented in table 7. All rates were converted to an hourly basis, assuming 8 hours per day (except for the printing trades where a 7½-hour day was assumed), 40 hours per week, and 4⅓ weeks (173 hours) per month. Under these assumptions, contribution rates ranged from less than 1 cent to more than 16 cents an hour and averaged 9.7 cents an hour. About a fourth of the plans, covering almost half of the workers, specified contributions between 9.5 and 10.5 cents per hour.

Contributions Based on Earnings or Payroll. A fixed percentage of employee earnings or payroll was contributed by employers under 169 plans, largely in the apparel, construction, and wholesale and retail trade industries. Contribution rates expressed as a percentage of earnings were based on the earnings of each individual worker or of the covered group as a whole (including, in some cases, the earnings of all workers in the group, even those not actually covered by the plan). Rates of contribution ranged from 1 to more than 6 percent, with the largest cluster at 3 percent. They averaged 2.8 percent. (See table 8.)

Other Contributions Bases. In five plans, employer contributions were based on factors other than employment or earnings. For example, employer contributions to the bituminous and anthracite coal pension and welfare funds were based on production. The bituminous agreement, for example, provided that: "There shall be paid into said [welfare and pension] fund, by each signatory operator, $0.40 per ton on each ton of bituminous produced for use or sale."

Instead of using entirely different factors to determine contributions, three plans used a combination of a percentage of earnings and time worked.

Although most plans had a uniform contribution rate for all participating employers, about 15 plans indicated provision for several rates which varied by area or industry or other factors. The provi-

TABLE 9. TYPE OF ADMINISTRATOR IN MULTIEMPLOYER PENSION PLANS UNDER COLLECTIVE BARGAINING, SPRING 1960

Type of administrator	Plans	Workers [1] (thousands)	Percent	
			Plans	Workers
All plans	798	3,324.8	100.0	100.0
Bipartite board	735	2,392.6	92.1	72.0
Bipartite board plus 1 neutral member	33	409.3	4.1	12.3
Tripartite board	9	325.2	1.1	9.8
Union appointed board	11	189.7	1.4	5.7
Employer appointed board [2]	5	6.4	.6	.2
Other	2	.6	.3	[3]
Information not available	3	1.0	.4	[3]

[1] Worker coverage includes both active and retired workers in 1959.
[2] Although employer-administered multiemployer pension plans under collective bargaining would presumably be eliminated by method of selection of the plans for study, it was determined during the course of analysis that the administrator (by Bureau definition) was, in fact, an employer appointed board.
[3] Less than 0.05 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

TABLE 10. MEDIUM OF FUNDING OF MULTIEMPLOYER PENSION PLANS UNDER COLLECTIVE BARGAINING, SPRING 1960

Medium of funding	Plans	Workers [1] (thousands)	Percent	
			Plans	Workers
All plans	798	3,324.8	100.0	100.0
Insured	119	334.4	14.9	10.1
Self-insured:				
Administrator	441	2,097.1	55.3	63.1
Corporate trustee	170	460.5	21.3	13.9
Other [2]	27	359.3	3.4	10.8
Information not available	41	73.6	5.1	2.2

[1] Worker coverage includes both active and retired workers in 1959.
[2] 9 plans covering 336,000 workers were self-insured before retirement, but a temporary annuity was purchased annually after retirement.

NOTE: Because of rounding, sums of individual items may not equal totals.

sions were found in plans negotiated in the food and trucking industries. Usually, the contribution rate is taken into account in determining the amount of benefit.

Type of Administration

The administration of a pension plan involves many day-to-day functions, such as processing applications, determining eligibility, awarding benefits, and interpreting the plan, as well as financial administration; i.e., selection of medium of funding, adoption of funding methods, receiving contributions, investments, payment of benefits, etc. Some or all of these administrative functions may be delegated to an insurance company, bank, service organization, union, employer, or salaried administrative staff. However, in this analysis, administration was classified on the basis of where the original responsibility resides. This responsibility is usually described in the trust indenture, the pension plan, or the union agreement.

Of the 798 multiemployer pension plans, 735 plans covering almost three-fourths of the workers provided for the appointment of a joint union-management board (table 9). Eleven of the 798 plans, accounting for less than 6 percent of all workers covered, were administered by the unions alone.[8]

Provision for the appointment of a neutral impartial chairman or trustee was found almost exclusively in the apparel industry. The two large plans in the coal mining industry were administered by tripartite boards. Sole union or employer administration was found in only two plans covering more than 1,000 workers.

Medium of Funding

Although the ultimate responsibility for the administration of the plan rests with the administrator, the function of providing benefits (the medium of funding) may be delegated to another party or organization. In more than half of the plans, covering almost two-thirds of the workers, these functions were not delegated, i.e., the payment of benefits was done directly by the administrator (table 10). About 1 out of 7 plans, covering a tenth of the workers, provided benefits through an insurance company. Slightly more than a fifth of the plans, covering about an eighth of the workers, funded benefits through a corporate trustee (a bank or trust company). Five percent of the plans had not determined, at the time of the study, the organization through which benefits would be funded. In the remaining plans (classified as "other" in the table), benefits were usually provided by a combination of payment by the administrator, a corporate trustee, and an insurance company.

Insured plans were concentrated largely in contract construction, motor transportation, and wholesale and retail trade. Over 40 percent of the workers in motor transportation plans were covered by insured plans. Corporate trusteed plans were most common in food and kindred products, printing and publishing, construction, water transportation, and wholesale and retail trade. Self-administered plans, however, were predominant in most industries.

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[8] Section 302(c) of the Labor Management Relations Act of 1947 requires equal representation of employers and employees in the administration of a fund where such fund is maintained by employer payments. The act does not apply to employer-only administered funds, to funds established before 1946, or to plans covering employees not engaged in interstate commerce.

State Government Employment of Scientific and Technical Personnel

EDITOR'S NOTE.—*The National Science Foundation has sponsored a series of surveys as a part of its function of maintaining a central clearinghouse for information covering all scientific and technical personnel in the United States. In carrying out this obligation, the NSF requested the Bureau of Labor Statistics to make surveys of the employment of scientists, engineers, and technicians in industrial firms and in State Governments, and the U.S. Civil Service Commission and the U.S. Office of Education to conduct similar surveys of such personnel in the Federal Government and in colleges and universities. The following article is the first in a series of summary reports based on the findings of these surveys which will appear in the Review. The December issue will include a report on the 1960 survey of scientific and technical personnel in industry.*

ALMOST 41,000 scientists and engineers and 47,000 technicians were employed in January 1959 by State agencies within the scope of a survey conducted by the Bureau of Labor Statistics for the National Science Foundation.[1] The survey covered all government agencies of the 50 States except those primarily concerned with judicial, legislative, and teaching functions. Scientists, engineers, and technicians accounted for nearly 10 percent of the more than 915,000[2] persons employed by the surveyed agencies. Scientists and engineers alone comprised 4.4 percent. It is estimated that these professional employees represented between 3 and 4 percent of all scientists and engineers in the United States in 1959.

Nearly 97 percent of all scientists, engineers, and technicians in State Governments were employed in three broad agency categories—highway and public works, health and welfare, and agriculture and conservation. Highway and public works agencies were the chief employers of engineers and technicians—both numerically and as a proportion of all agency employment (table 1). On the other hand, scientists were concentrated in health, agriculture,[3] and related agencies.

In each major type of agency, the principal function performed by scientists and engineers was the operation of the agency program and the carrying out of the services for which the agency was responsible. Inspection—often a statutory function of agencies—was the primary activity of the second largest number of scientists and engineers. Planning (almost three-fourths of which was performed in highway and public works departments) ranked third as a principal activity. Fewer than 6 percent of all scientists and engineers were primarily engaged in research. However, in health and agriculture agencies as many as 14 percent were performing this function—reflecting the emphasis on projects related to safeguarding and improving the health and nutrition of State residents. It is evident that the type of employing agency largely determines not only the number and kinds of scientific and technical workers required but also the functions they perform.

Employment of scientists and engineers in the 50 States ranged from 71 in Alaska to 5,310 in California. In addition to California, four States—New York, Massachusetts, Illinois, and Texas—employed more than 1,500 scientists and engineers in January 1959. Among the factors affecting scientific and technical employment were State population and income, natural resources, types of industries, prevailing philosophy of government with respect to the types and extent of services provided, and the division of responsibility between State and local governments. Because of these and a host of other factors, data on numbers and types of technical personnel may not be comparable among States. (See table 2.)

Engineers

Employment Distribution. Engineers, forming the largest professional group in the survey, outnumbered scientists by more than 2 to 1. Civil engineers made up 93 percent of the engineering group; mechanical and electrical engineers each

[1] For the full report on the survey, see *Employment of Scientific and Technical Personnel in State Government Agencies: Report on a 1959 Survey* (National Science Foundation Bull. 61-17, 1961). Available from Superintendent of Documents, Washington; price, 45 cents.

[2] Total State Government employment for January 1959 was estimated by the Bureau of Labor Statistics to be slightly more than 1.5 million; nearly a third of this employment was in educational institutions.

[3] Since this survey did not include educational institutions, agricultural experiment stations and agriculture extension services were also excluded.

accounted for about 2 percent; and the remaining 3 percent included safety, industrial, valuation, chemical, petroleum, and mining engineers, as well as those engineers not identified as to specialty. (See chart.)

About 9 out of every 10 of the 26,082 civil engineers were employed in highway and public works departments, where most of them were planning, designing, or supervising the construction of new roads. Others were concerned with the maintenance of roads or with public works projects, such as the design and construction of public buildings. Nearly 4 percent of the civil engineers were employed as sanitation specialists in health and welfare departments. The remainder were about equally divided between agriculture and conservation agencies and a group of miscellaneous agencies. This latter group included economic development agencies which employed civil engineers as city planners.

Nearly half of the electrical and mechanical engineers (together numbering 1,143) were in highway and public works agencies. Substantial numbers of electrical engineers were employed in State public utility or public service departments. Among the 947 engineers others than civil, electrical, and mechanical were safety and industrial engineers in State labor departments, valuation engineers in revenue departments, and chemical and mining engineers in conservation and related agencies.

More than half (56 percent) of all engineers were engaged in performing functions related to the operations and services of their agencies; planning and inspection each accounted for the activities of about one-fifth. Only a little more than 1 percent of the engineers were engaged in research. This contrasts sharply with the engineers employed by industrial concerns in 1959, where more than one-third were engaged in research and development or the administration of such work.[4]

Education and Licensing of Engineers. Many State-employed engineers evidently qualified for their positions through experience, without completing their formal education. The survey data indicated that only 59 percent of them held a bachelor's or higher degree in any subject field. This is a considerably lower proportion of college graduates than occurs among engineers employed in private industry—78 percent in 1959.[5] In highway and public works departments, where civil engineers account for most of the engineers employed, only 56 percent had college degrees. On the other hand, in health and welfare agencies, more than 88 percent were college graduates.

Although every State has a licensing or registration board, licenses are not required for most engineering positions. Only 45 percent were licensed or registered as professional engineers.

TABLE 1. DISTRIBUTION OF ALL STATE EMPLOYEES AND OF ENGINEERS, SCIENTISTS, AND TECHNICIANS, BY TYPE OF AGENCY, JANUARY 1959

Agency	All State employees	Engineers	Scientists	Technicians	Other employees
All agencies	915,406	28,172	12,558	46,798	827,878
Highway and public works	237,543	24,887	552	38,884	173,220
Health and welfare	321,030	1,212	8,241	4,082	310,495
Agriculture and conservation	59,321	724	6,207	2,925	49,465
Other	297,512	1,349	558	907	294,698

Life Scientists

Biological Scientists. The largest group among the scientists reported in the survey was composed of biological scientists. The group included pathologists, microbiologists, pharmacologists, bacteriologists, toxicologists, botanists, zoologists, entomologists, and others; but information was not obtained on the numbers in different occupational specialties. Well over half of the 3,700 biological scientists were working for agriculture and conservation agencies, mainly in positions related to the operation of fish hatcheries or the study of marine life or wild game. Most of the remainder were employed in health department laboratories established for carrying out testing or research programs. Altogether, more than one-fourth of all the biological scientists were engaged in research.

Agricultural Scientists. State Governments employed nearly 3,500 agricultural scientists in 1959. These scientists, who were primarily engaged in studying and improving agricultural productivity, included those working in agronomy, animal husbandry, forestry, horticulture, range

[4] See *Scientific and Technical Personnel in American Industry: Report on a 1959 Survey* (National Science Foundation Bull. 60-62, 1960). Available from Superintendent of Documents, Washington; price, 45 cents.

[5] Ibid.

management, soil culture, and veterinary science (excluding veterinarians providing care to animals). They were employed almost exclusively in agriculture, conservation, and related agencies. About one-half of the agricultural scientists performed services in connection with tree propagation and other aspects of forest management or carried on the operations of the subdivisions in departments of agriculture concerned with milk, egg, and meat production or with specific crops

Scientists, Engineers, and Technicians Employed by State Governments, January 1959

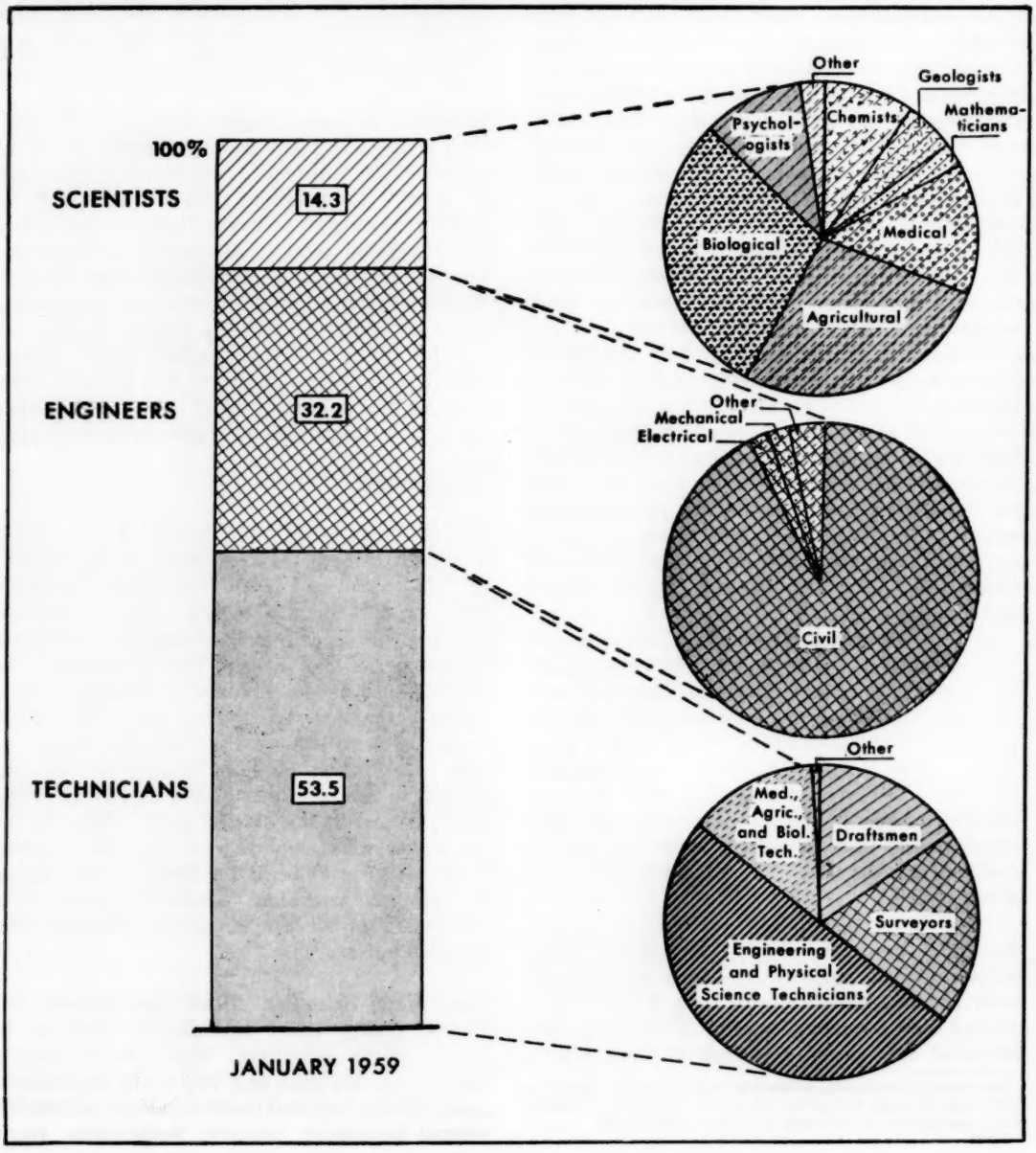

TABLE 2. SCIENTISTS AND ENGINEERS IN ALL AGENCIES, BY OCCUPATIONAL GROUP AND STATE, JANUARY 1959

State	All scientists and engineers	Engineers	Chemists	Geologists and geophysicists	Mathematicians	Medical scientists	Agricultural scientists	Biological scientists	Psychologists	Other scientists
Total	40,730	28,172	1,194	603	343	1,657	3,473	3,716	1,282	290
Northeast	8,880	6,447	352	60	93	496	402	701	290	39
Connecticut	604	404	16	3	14	47	27	66	27	----
Maine	395	249	12	6	2	11	47	53	15	----
Massachusetts	1,856	1,395	76	----	3	153	26	72	126	5
New Hampshire	398	330	12	----	----	7	9	33	----	7
New Jersey	861	660	19	10	20	60	43	40	8	1
New York	2,985	2,179	152	18	44	110	103	323	32	24
Pennsylvania	1,274	875	55	19	9	75	121	58	60	2
Rhode Island	170	93	3	----	1	----	15	39	19	----
Vermont	337	262	7	4	----	33	11	17	3	----
Middle West	9,704	6,814	273	189	92	276	621	970	447	22
Illinois	1,831	1,390	56	----	31	50	66	134	104	----
Indiana	676	481	12	5	3	32	39	57	47	----
Iowa	427	332	9	13	2	7	9	25	30	----
Kansas	482	372	21	33	3	9	4	29	1	10
Michigan	1,415	901	57	40	13	33	72	282	17	----
Minnesota	856	546	28	6	5	13	92	124	34	8
Missouri	1,044	878	17	32	7	17	13	64	16	----
Nebraska	260	181	10	2	----	7	25	24	11	----
North Dakota	215	156	6	17	1	----	8	22	2	3
Ohio	1,425	891	32	25	16	87	117	100	156	1
South Dakota	225	147	7	15	----	1	9	43	3	----
Wisconsin	848	539	18	1	11	20	167	66	26	----
South	11,269	7,719	359	171	93	533	935	990	327	142
Alabama	545	408	20	6	1	7	23	70	10	----
Arkansas	275	161	11	8	1	14	54	17	5	----
Delaware	105	67	5	3	1	----	7	13	8	1
Florida	998	614	77	13	3	6	101	138	45	1
Georgia	1,214	886	20	5	12	80	79	123	7	2
Kentucky	397	251	13	6	4	33	37	38	8	7
Louisiana	605	448	12	20	1	37	8	51	28	----
Maryland	789	576	10	3	1	35	29	84	51	----
Mississippi	301	170	9	6	3	20	48	38	7	----
North Carolina	923	673	52	12	11	24	47	86	18	----
Oklahoma	284	162	11	8	----	13	29	49	12	----
South Carolina	483	334	18	2	----	35	67	13	14	----
Tennessee	1,077	661	17	12	21	90	29	92	28	127
Texas	1,608	1,279	20	29	22	47	121	78	10	2
Virginia	1,034	608	52	22	7	20	211	56	58	----
West Virginia	635	421	12	16	5	72	45	44	18	2
Far West	10,877	7,192	210	183	65	352	1,515	1,055	218	87
Alaska	71	29	4	2	----	6	3	24	3	----
Arizona	190	96	6	3	----	3	37	39	2	4
California	5,310	3,598	109	117	26	193	792	313	161	1
Colorado	535	411	12	4	2	17	14	52	14	9
Hawaii	319	135	2	----	10	15	85	62	7	3
Idaho	392	186	6	----	----	8	107	77	8	----
Montana	418	285	4	1	6	24	39	53	6	----
Nevada	255	170	6	5	2	15	11	37	4	5
New Mexico	277	135	5	8	6	14	24	46	3	36
Oregon	1,173	729	37	20	6	20	199	141	6	15
Utah	311	189	6	9	2	8	38	44	3	12
Washington	1,371	1,050	8	8	2	29	137	134	1	2
Wyoming	255	179	5	6	3	----	29	33	----	----

important in the individual States. Almost 40 percent were primarily engaged in inspection and testing activities.

Medical Scientists. The 1,657 State-employed medical scientists included physicians, dentists, public health specialists, pharmacists, and members of other professions concerned with human diseases and health. (Medical practitioners were excluded.) Almost all were employed in health and welfare agencies where they were concerned with the administration of State hospitals, laboratories, and diagnostic clinics; inspection and licensing of private hospitals, sanitariums, and homes for the aged; clinical research; and evaluation of new techniques in the treatment of various diseases or the methods of providing medical care.

Physical Scientists

Physical scientists, numbering 2,174, comprised only about 5 percent of all State-employed scientists and engineers in 1959, whereas in private industry, physical scientists accounted for 15 percent of scientific and engineering employment.

Chemists. More than half of all physical scientists employed by State Government agencies were chemists. The great majority of the 1,194 chemists were employed in State laboratories under the jurisdiction of either health or agriculture departments, where they were concerned with the enforcement of food, drug, and cosmetics laws or the inspection and testing of fertilizers, seeds, and pesticides. In highway and public works departments, chemists tested soils and materials used in road and other construction. About 32 percent of all chemists were in testing and inspection activities, and 17 percent were engaged in research.

Geologists and Geophysicists. More than one-fourth (603) of the physical scientists were geologists and geophysicists, most of whom were employed in agriculture and conservation or highway and public works departments. Nearly all of those in agriculture and conservation agencies were employed in geological surveys and mineral resources management. Geologists employed by highway and public works departments were engaged in work related to locating desirable sites for roads and dams and solving problems of water supply, flood control, and soil erosion.

Mathematicians. Of the 343 mathematicians employed by State Governments, about one-third were in health and welfare agencies, mainly in the area of vital statistics. Some were employed in revenue, economic development, highway, and other departments, where they were programing studies for electronic computers. A considerable number were actuaries employed in insurance and retirement agencies.

Psychologists

Approximately 94 percent of the 1,282 State-employed psychologists were concentrated in health and welfare agencies. The overwhelming majority were employed in mental health departments, where they were principally concerned with the care and treatment of the mentally ill and retarded. Some were engaged in rehabilitation programs for criminals and alcoholics. A substantial number conducted research dealing with drug therapy, conditioned reflexes, the nervous system, and the effects of stimulants.

Technicians

Technicians—a group generally classified occupationally between the levels of scientists and engineers and of skilled craftsmen—are becoming increasingly important in government employment, as well as in private industry. Most of the 47,000 State-employed technicians acted as assistants to scientists or engineers. Overall, there were 115 of these auxiliary workers in State agencies for every 100 scientists and engineers—a much higher ratio than in private industry, where only 72 technicians were employed for every 100 scientists and engineers in 1959. However, only in highway and public works agencies did State-employed technicians exceed the number of scientific and engineering personnel.

The technicians employed in State agencies can be divided into two broad groups. One includes 7,132 draftsmen, 9,325 surveyors, and 23,781 engineering and physical science technicians, almost all (97 percent) of whom worked in highway and public works departments. The other group includes 6,236 medical, agricultural, and biological technicians, 60 percent of whom worked in health and welfare agencies and 38 percent in agriculture and conservation agencies.

Only about 800 technicians (2 percent of the total) were employed primarily in research. In relation to scientists and engineers engaged primarily in research, the ratio is about 1 technician to 3 professional workers. The proportion of technicians performing research was highest (8 percent) in health agencies. Research was the only function for which data were requested for technicians in the survey.

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Division of Manpower and Employment Statistics

UMWA Welfare and Retirement Fund Report[1]

GENERAL ECONOMIC CONDITIONS and competition from other fuels combined to reduce the income of the United Mine Workers of America Welfare and Retirement Fund to the lowest levels since the present fund's establishment in 1950. At the same time, the number of benefit payments increased. (In the fiscal year ending June 30, 1960, pension benefits were authorized for 4,660 miners—almost a thousand more than were granted the previous year.)

Total income for fiscal 1961 was $116,692,800. Royalty receipts contributed $114,492,500 of this amount, the remainder coming from returns on securities. This is 10 percent less than the previous year's receipts and 26 percent less than the amount received during fiscal 1957.

Expenditures for the period ending June 30, 1961, totaled $133,132,200. Payments of $128,699,700 (96.7 percent of all expenditures) aided 201,051 beneficiaries, some beneficiaries receiving more than one benefit. All administrative costs of the Trust Fund were 3.3 percent of total expenditures. This includes the cost of the Washington headquarters and its 10 Area Medical Offices.

UMWA WELFARE AND PENSION FUND BENEFIT EXPENDITURES, 1957–61

Benefit	1961	1960	1959	1958	1957
Total	$128,699,700	$143,916,400	$139,877,800	$138,501,700	$138,018,300
Pensions	$69,968,900	$78,988,700	$78,327,700	$76,657,500	$75,002,600
Hospital and medical care	55,044,700	61,209,800	57,783,100	58,135,700	59,584,600
Funeral expense and widows' and survivors' benefits	3,629,700	3,671,300	3,705,400	3,641,100	3,353,900
Disaster benefits	56,000	46,700	60,700	67,400	77,200

Benefit expenditures during the past 5 years were as shown in the accompanying table.

As of June 30, 1961, the unexpended balance of the Trust Fund was $99,832,100. Despite imposition of stricter eligibility requirements for hospital and medical care benefits, expenditures exceeded income by a wide margin in the 2 previous years. Concerned by this imbalance, the trustees, in December 1960, reduced the monthly pension payment from $100 to $75, beginning with payment for February.

In explanation, the trustees stated: "To permit the continuation of a situation wherein the Trust Fund pays out more in benefits than it receives in income would inevitably lead to more drastic reduction in benefits and seriously impair the ability of the fund to provide those benefits in the future. . . . It is not possible to state how long the reduced monthly pension amount will remain in effect. While all studies of future demand for coal forecast a slow but steady increase, the constantly increasing number of persons receiving Trust Fund pensions makes it probable that the reduction will be in effect for some time. However, at such time in the future that Trust Fund income reaches a continuing higher level, consideration will be given to restoring the monthly pension to its former amount."

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[1] Information from *United Mine Workers of America Welfare and Retirement Fund: Report for the Year Ending June 30, 1961*, Washington, 1961. See also the following articles in the *Monthly Labor Review:* "Resumption of Benefits Under UMWA Welfare Fund," December 1950 (pp. 706-709); "Four Years of Operation Under the UMWA Welfare and Retirement Fund," January 1952 (pp. 37-38); and "Operations Under the UMWA Welfare and Retirement Fund," November 1954 (pp. 1232-1234).

Wage Chronology: International Shoe Co.

Supplement No. 3—1958–61

THE 3-YEAR agreements between the International Shoe Co. and the United Shoe Workers of America and the Boot and Shoe Workers that were scheduled to expire on September 30, 1958,[1] were extended until October 10, 1958. They were replaced by 2-year agreements negotiated on October 12, which provided a 4-percent wage increase effective October 1, 1958, and an additional 2.5 percent on October 1, 1959, for about 14,500 workers. The agreements also revised reporting pay provisions and liberalized life insurance for retired employees.

The day after these contracts expired on September 30, 1960, agreement was reached on terms of new 2-year contracts. The new contracts, which covered about 12,300 workers at 33 plants, provided for wage increases of 5 cents an hour effective January 2, 1961, and an additional 3 cents an hour effective January 1, 1962. The agreements also improved the hospital benefits program, liberalized vacation eligibility requirements, and provided vacation benefits for employees retiring during the year. The current agreements are to continue in effect until September 30, 1962, without provision for any reopening.

The following tables show the changes that were incorporated in the agreements negotiated in 1958 and 1960.

[1] For previous developments, see *Monthly Labor Review*, July 1952 (pp. 30–34), April 1953 (pp. 402–403), July 1958 (pp. 765–766), or Wage Chronology Series 4, No. 25.

A—General Wage Changes

Effective date	Provisions	Applications, exceptions, and other related matters
Oct. 1, 1958, USWA and B&SW (B&SW agreements dated Nov. and Dec. 1958, and USWA agreements dated Dec. 1958 and Jan. 1959).	4 percent increase, averaging approximately 6 cents an hour.	Increase applied to piece, hourly, and sample extra rates.[1]
Oct. 1, 1959, USWA and B&SW (B&SW agreements dated Nov. and Dec. 1958, and USWA agreements dated Dec. 1958 and Jan. 1959).	2.5 percent increase, averaging approximately 4 cents an hour.	Do.
Jan. 2, 1961, USWA and B&SW (agreements dated Oct. 1960).	5 cents an hour increase	Increase applied to hourly rates. In contrast to procedure followed in 1958 and 1959, the earnings of pieceworkers were increased by the amount of the general wage change times the number of hours worked during the week.
Sept. 3, 1961, USWA and B&SW.		Minimum rate increased to $1.15 an hour as required by 1961 amendment to Fair Labor Standards Act; other rates in the progression schedule increased to reflect new minimum.
Jan. 1, 1962, USWA and B&SW (agreements dated Oct. 1960).	3 cents an hour increase	Increase applied to hourly rates. Earnings of pieceworkers were increased by the amount of the general wage change times the number of hours worked during the week.

[1] Sample extra rates apply to some piecework operations on samples where the workmanship is visible.

B—Minimum Hourly Rates for Nonincentive Workers, All Areas

Effective date	Rate	Applications, exceptions, and other related matters
Mar. 1, 1956	$1.00	In accordance with amendment to Fair Labor Standards Act, effective Mar. 1, 1956.
Oct. 1, 1958	1.00	A schedule was established providing automatic progression increases of 2½ cents per hour each 4 weeks to a rate that was equal to the minimum rate plus at least 50 percent of the difference between the minimum and maximum;[1] company could grant additional increases or the maximum rate to qualified workers, at its discretion, regardless of time.
Sept. 3, 1961	1.15	In accordance with amendment to Fair Labor Standards Act, effective Sept. 3, 1961; other rates in the progression schedule were increased to reflect the increase in the minimum rate, although this was not included in the contract.

[1] There are various maximums, depending on the length of time necessary to attain the skill required to perform a specific job. The following provides an example of the progression schedule for 2 jobs in the company's Springfield, Ill. (B&SW), plant:

(a) *Cut back shoes*

Minimum	$1.15
After 4 weeks	1.175
After 8 weeks	1.20
After 12 weeks	1.225
After 16 weeks	1.25
After 20 weeks	1.275
After 24 weeks	$1.30
After 28 weeks	1.325
After 32 weeks	1.35
Maximum	1.535

(b) *Back shoe boy (lasting department)*

Minimum	$1.15
After 4 weeks	1.175
After 8 weeks	1.20
After 12 weeks	1.225
Maximum	1.265

C—Related Wage Practices

Effective date	Provisions	Applications, exceptions, and other related matters
	Holidays	
Oct. 1, 1958, USWA and B&SW (B&SW agreements dated Nov. and Dec. 1958, and USWA agreements dated Dec. 1958 and Jan. 1959).	----------	Agreement continued Veterans Day as a paid holiday and Memorial Day as an unpaid holiday for which time and one-half was paid for time worked.
	Reporting Time	
Oct. 1, 1958, USWA and B&SW (B&SW agreements dated Nov. and Dec. 1958, and USWA agreements dated Dec. 1958 and Jan. 1959).	Changed to: Minimum 3 hours' pay at average rate guaranteed employees required to report in morning, 2 hours' for employees required to report one-half hour or less before usual lunch period.	
	Down Time	
Oct. 1, 1951, USWA and B&SW (agreements dated Oct. 1951).	----------	Correction: Guarantee extended to time lost through lack of work or machine breakdown. Time lost must not have been the fault of employee. Applicable only if employee was required to remain in plant or accepted assignments to other machines or operations.
Oct. 1, 1960, USWA and B&SW (agreements dated Oct. 1960).	Changed to: 90 percent of average hourly earnings paid pieceworkers for time lost in excess of 20 minutes because of lack of work.	

C—Related Wage Practices—Continued

Effective date	Provisions	Applications, exceptions, and other related matters
	Technological Change Pay	
Oct. 1, 1960, USWA and B&SW (agreements dated Oct. 1960).	Rate midway between 90 percent of class wage (i.e., expected earnings per hour for an average operator) and 90 percent of employees' straight-time hourly earnings, for 120 hours or until a piece rate had been authorized, guaranteed operators transferred to machine that represented a technological change.	New machine must have replaced another machine or hand operation that paid the same class wage.
	Paid Vacations	
June 1, 1960, USWA and B&SW (agreements dated Oct. 1960).	----------	Added: Employees working 100 but less than 1,100 hours during vacation qualifying period, entitled to retirement benefits, and retiring before end of vacation qualifying period, to receive 6 percent of wages earned during qualifying period. Employees with 1,100 hours of work or more to receive 3 weeks' pay.
Oct. 1, 1960, USWA and B&SW (agreements dated Oct. 1960).	----------	Changed: Employees with (1) 1 or more years' service, (2) a vacation qualifying date other than June 1, and (3) a total of 1/12 of 1,100 hours worked for each full month of employment between employment anniversary date and following June 1, to receive benefits equal to 1/12 of the number of hours' pay due for a 1-week vacation for each month employed between employment anniversary date and following June 1. Proportionate adjustment to be made after 5th and 15th anniversary of employment.
	Group Insurance	
Oct. 23, 1958 (company memorandum of same date).	Added: *Life insurance*—$1,000 noncontributory or $2,000 contributory policy provided retired employees.[1]	Retirees permitted to choose between two amounts. Those choosing larger amount to contribute 80 cents a month, company to pay remaining premium.
Jan. 2, 1961, USWA and B&SW (agreements dated Oct. 1960).	Increased to: *Hospitalization (room and board)*—$12.00 per day (maximum $372). *Special hospital services*—Up to $240.	Hospital and special services benefits available after patient paid $25 for each confinement.
	Pension Plan	
Jan. 1, 1958 (supplemental agreement dated Oct. 31, 1958).	----------	Added: For purpose of pension benefit only, provision for credited service extended to employee with 2 or more years' seniority whose job was eliminated and who did not refuse a job he was physically able to perform. Provision that employee did not lose credited service, upon plant shutdown, if employed in another company plant within 1 year of layoff date, continued.

[1] Since 1948, the company provided employees ineligible for pension benefits because they lacked 15 years' credited service but who were (1) 65 years old or (2) 60 but not yet 65 and unable to perform available work to which they were entitled, with life insurance coverage under the same election and contribution provisions as other retirees (1) for a period equal to employee's length of service, if less than 10 years, or (2) for life, if employee had 10 or more years' continuous credited service.

Significant Decisions in Labor Cases*

Labor Relations

Subcontracting Clauses. The Federal district courts in Minnesota and Arizona disagreed,[1] in cases with somewhat similar facts, as to the basis for enjoining construction-site picketing to obtain a subcontracting clause in a collective bargaining agreement. The courts agreed that picketing a general contractor to obtain a clause requiring subcontractors to comply with the provisions of the primary contract violated the secondary-boycott ban of the Labor Management Relations Act. However, they differed as to whether the picketing could be enjoined on the ground that it also violated the hot-cargo prohibition.

In the Minnesota case, the union representing the general contractor's employees asked, in contract negotiations, for a pay raise and a clause in the agreement which would require all subcontractors to comply with all of its terms on any work done at the job site. When the employer refused to accept the subcontracting clause, the union picketed several of his projects. About a week after the picketing began, the contractor filed charges with the National Labor Relations Board. Upon investigation, one of the Board's regional directors petitioned the court for a temporary injunction against the picketing, which he declared illegal under both the secondary-boycott and the hot-cargo provisions of the act.

The court held that, while section 8(e),[2] which was added to the act by the 1959 amendments, sanctioned such subcontracting agreements between labor organizations and employers in the construction industry, it did not protect picketing for such agreement when the picketing had the results prohibited by the secondary-boycott and hot-cargo provisions of sections 8(b)(4)(i)(ii) (A) and (B) of the act. The court reasoned that the legislative history of the 8(e) proviso permitting subcontractor clauses in the construction industry clearly showed that Congress did not intend to exempt building trades unions from the act's secondary-boycott provisions. Moreover, the court said, although the section 8(e) proviso relating to subcontracting in the garment industry explicitly protects garment unions under the secondary-boycott proviso of 8(b)(4)(B), the 8(e) proviso on the construction industry has no such saving feature. Therefore, the court granted the injunction on the ground that the picketing violated both the hot-cargo and secondary-boycott bans.

The unions involved in the Arizona case not only demanded recognition as the representative of the general contractor's employees but also an agreement containing a subcontracting provision similar to the one in the Minnesota case. When the contractor refused to accede to these demands, one of the unions began picketing and, after it stopped doing so, the other began. The court proceedings originated on the same grounds as in the Minnesota case, with the additional charge of illegal organizational picketing.

The court found valid the NLRB regional director's argument that section 8(e) was not intended to change the *Sand Door* case[3] interpretation of section 8(b)(4). However, the court added that it was "obvious" that Congress, in the 1959 amendments, intended that section 8(b)(4) should proscribe only those hot-cargo agreements prohibited by section 8(e). Therefore, the court reasoned that, if subcontractor clauses in the construction industry are legal under section 8(e), they could not violate section 8(b)(4)(i)(ii)(A). Moreover, the court held that the 8(b)(4)(A) restrictions against coercive measures designed to force an employer to sign a hot-cargo agreement do not apply when the contract is legal under 8(e), as was the case here.

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*Prepared in the U.S. Department of Labor, Office of the Solicitor. The cases covered in this article represent a selection of the significant decisions believed to be of special interest. No attempt has been made to reflect all recent judicial and administrative developments in the field of labor law or to indicate the effect of particular decisions in jurisdictions in which contrary results may be reached based upon local statutory provisions, the existence of local precedents, or a different approach by the courts to the issue presented.

[1] *Knapp* [NLRB] v. *Rochester Building and Construction Trades Council* (D.C. Minn., July 11, 1961).

Kennedy [NLRB] v. *Construction, Production and Maintenance Laborers* (D.C. Ariz., June 6, 1961).

[2] *Local 1976, United Brotherhood of Carpenters* v. *NLRB*, 357 U.S. 93 (1958); see *Monthly Labor Review*, August 1958, pp. 892–893 and November 1955, pp. 1277–1278.

On the secondary-boycott issue, however, the Arizona court held that since Congress had intended to leave intact the *Denver Building Council* decision [3] that construction-site picketing to enforce a subcontracting clause was an illegal secondary boycott, then picketing to obtain such an agreement would likewise be illegal under 8(b)(4)(i)(ii)(B) of the 1959 amendments. The court explained that picketing to enforce a subcontracting clause is illegal not only because it attempts to terminate the subcontractor's agreement but also because it seeks to force the subcontractor to observe union standards. Therefore, the court concluded: "Picketing may not be used against one employer to change working conditions with another employer where, as in the present case, such change is attempted to be accomplished through a disruption of business."

Finally, the court found that the unions had violated the section 8(b)(7)(c) restrictions on organizational picketing. The court conceded that each union picketed for less than 30 days but, since the two acted in concert to support each other's demands and together had picketed for more than the permitted 30 days, the court granted the injunction.

Secondary Boycotts. The National Labor Relations Board [4] held that union handbilling at retail stores to inform the public of a dispute between the union and the employing wholesaler-distributor was protected by the publicity proviso of section 8(b)(4) of the Labor Management Relations Act even though the primary employer had not "produced" the products involved. The Board held that the words "produced" and "product," as used in the section, have "labor" as their prime requisite. The Board concluded, therefore, that the activities of a wholesaler with respect to the products which he distributes are sufficient to bring him within the definition of a primary employer of the section's publicity proviso. The Board also held that the publicity proviso does not require that the handbills be 100 percent correct as long as there is no evidence of intent to deceive or substantial departure from fact.

When the union in this case, a Teamster local, was unsuccessful in contract negotiations for truckdrivers of the Lohman Sales Co., it asked four retailers to stop buying from Lohman. The retailers refused so the union began passing out handbills in front of their stores stating that Lohman's employees were on strike and that Lohman's products were sold in the stores and asked customers not to buy Lohman's products. The handbills distributed outside one shop mistakenly said that it bought both tobacco and candy from Lohman when in fact the store purchased only cigarettes from the distributor. This error was immediately corrected when the store manager explained this to the union. This same store and another in the same chain subsequently decided to stop buying from Lohman so that the handbilling would not be continued.

The Board pointed out that when a union is involved in a primary dispute with an employer, the second proviso to section 8(b)(4) allows "publicity, other than picketing, for the purpose of truthfully advising the public . . . that the products are produced by the employer . . . and are distributed by another employer, as long as such publicity does not have an effect of inducing any individual employed by any person . . . to refuse to . . . perform any services at the establishment of the employer engaged in such distribution." The majority found that the "natural meaning" of the words "product" and "produced" would require the interpretation that the proviso is not restricted to employers who actually fabricate products, but covers primary employers who otherwise handle the goods involved in the dispute. On this reasoning, the majority concluded that a wholesale distributor was within the scope of 8(b)(4).

The Board ruled, however, that the union committed a violation of section 8(b)(4)(i)(B) when some of its members orally requested employees of the retailers not to deal with Lohman. This, said the Board, was an inducement to the employees not to perform their jobs with the purpose of getting their neutral employers to cease doing business with Lohman. At the same time, the Board did not find that these oral appeals to the employees of the secondary employer had such a direct effect on the secondary employers that such appeals amounted to prohibited "coercion" or "restraint."

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[3] *NLRB* v. *Denver Building Council*, 341 U.S. 675 (1951).

[4] *Local 537, International Brotherhood of Teamsters* and *Lohman, d.b.a. Lohman Sales Co.* 132 NLRB No. 67 (Aug. 10, 1961).

Member Rodgers disagreed with the majority's reading of the 8(b)(4) proviso. He would hold that the employer who is the object of the primary dispute must be the one who actually produces the goods in question. Thus, handbilling against a distributor would be illegal.

Superseniority. The National Labor Relations Board unanimously ruled [5] that the awarding of superseniority to strike replacements and to strikers who returned to work during a strike is an unfair labor practice under the LMRA. The Board held that the superseniority plan was discriminatory and an infringement of the employees' right to strike.

While the union in this case was on strike for a new contract, the employer adopted a policy of granting a 20-year seniority to new employees hired as strike replacements and 20 years' additional seniority both to laid-off employees and strikers who returned to work. The employer also demanded that any strike settlement include the superseniority plan and continued to insist on this as a condition for any agreement. The union ultimately ended the strike without having reached agreement, and the parties later agreed to submit the superseniority issue to the Board, with the plan to remain in effect pending its disposition. When the strike ended, the employer recalled all strikers who had not been replaced by that time, but a large number of them were laid off several months later during a reduction in force because they had insufficient seniority under the superseniority plan.

The Board held that the superseniority plan exceeded the employer's rights to obtain permanent replacements for economic strikers [6] because it made it possible to meet a corollary requirement for nondiscriminatory and complete reinstatement of all unreplaced strikers. Further, the implicit offer of a benefit to individual strikers for abandoning the strike and returning to work violated section 8(a)(1) because it interfered with their rights under section 7 of the LMRA. The Board also held that the plan violated the discrimination prohibitions of section 8(a)(3) of the act because it affected the employment tenure of both the strikers who were replaced and those who were not; its effects lasted long after the end of the strike; and it offered benefits to individual strikers to abandon the strike and thereby effectively divided the strikers against themselves, with the result that the strike was impaired and future bargaining was made very difficult. The Board ordered the employer to rescind the plan.

The Board also held that section 8(a)(5) of LMRA was violated because the employer refused to bargain on the issue of the plan and insisted that it go into operation in spite of the union's objections. This refusal converted the economic strike to an unfair labor practice strike, which meant that the employer's failure to reinstate all strikers who had not been replaced by the time of the strike's conversion was also illegal. These workers, as well as the reinstated strikers who were subsequently laid off, are to be offered reinstatement and given back pay.

Labor Reform Act. A U.S. district court held [7] that the Secretary of Labor is authorized under section 601 of the Labor-Management Reporting and Disclosure Act to delegate his investigation and subpena functions to the Commissioner of the Bureau of Labor-Management Reports. The court held, moreover, that section 607 of the act, read in conjunction with 601, authorizes the Secretary and the Commissioner to delegate the investigatory functions to the Department of Justice or to any other Government agency.

This case arose when the Commissioner subpenaed Thomas Battles, a labor consultant in the Philadelphia area, to appear before a Justice Department official, as part of an investigation of the affairs of Teamsters Local 107, held to determine whether any person had violated or was about to violate any provision of the LMRDA. When Battles refused to testify and questioned the right of the Department of Justice to conduct such an investigation, the Secretary of Labor petitioned the court for an order to enforce the subpena.

The court rejected Battles' contention that the Secretary of Labor could not delegate his powers under the act. It found that section 601(a) gave the Secretary authority to conduct investigations and that 601(b), which states how this power may be exercised, allows the Secretary to designate

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[5] *Erie Resistor Corp.* and *Local 613, International Union of Electrical Workers*, 132 NLRB No. 51 (July 31, 1961).
[6] *NLRB* v. *Mackay Radio & Telegraph Co.*, 304 U.S. 333 (1938).
[7] *Goldberg* v. *Battles* (U.S.D.C.E.D. Pa., Aug. 8, 1961).

officers to conduct the investigations and authorizes them to issue subpenas. Battles had argued that (a) and (b) should be read separately, and since part (a) does not mention delegation, delegation is not allowed.

In response to Battles' further claim that, if the delegation were legal, the Secretary could delegate investigatory power to officers in the Department of Labor only, the court said that section 607, read in conjunction with section 601, indicates that the Congress intended the Secretary of Labor to be able to make as much use of other Government agencies as the law would permit. Therefore, the court found, he had authority to delegate the power to conduct an entire investigation to the Department of Justice, as in this case, or to any other Government agency.

The court also dismissed Battles' contention that he need not obey the subpena since he had no responsibility under the act and since section 601(a) permitted the Secretary to question only possible violators of the act. The court said that the language of the section clearly allowed the the Secretary to interrogate anyone whom he thought could give him information concerning a possible violation of the act.

Finally, the court rejected three constitutional objections posed by Battles. First, Battles claimed that, although section 601(b) provides immunity from prosecution for one who testifies pursuant to a subpena, he would not retain this immunity if the subpena were later found to be a nullity. The court found irrelevant the cases cited by Battles since no subpenas were issued there. The court also found without merit his second contention—that he would be subject to prosecution under State law even though he had immunity under the Federal act.[8] Third, the court saw no support for Battles' argument that the Secretary who enforces the act, was acting contrary to "all principles of Anglo-American jurisprudence" when he delegated his investigatory power to the Justice Department, which prosecutes those who violate the act.

The case he cited as support,[9] the court found, did not discuss the issue of whether the same agency could both investigate and prosecute, and the court had been unable to find any relevant case.

Unemployment Insurance

Labor Dispute Disqualification. The Supreme Court of Idaho affirmed[10] an order of the State's Industrial Accident Board denying unemployment compensation to Idaho trucking workers because their unemployment was due to a labor dispute which shut down the trucking industry in 11 Western States following a strike by a local truckers' union in the Sacramento Valley and they had a direct interest in the outcome of the dispute, primarily in the form of increased wages. In a similar case decided by the Utah Supreme Court in early 1960,[11] Utah workers affected by the same work stoppage had been allowed unemployment benefits.

In this case, the Idaho workers were members of local unions of the International Brotherhood of Teamsters and were either line (over-the-road) drivers or terminal employees (local pickup and delivery drivers, warehouse personnel, clerical workers, etc.). Their local unions were affiliated with those in several neighboring States, in Teamsters Joint Council 67, in turn affiliated with other joint councils in the Western Conference of Teamsters, which in 1957 created an Over-the-Road Negotiating Committee to bargain for all line drivers in the 11 States.

The employers in this case, 10 interstate trucking companies with terminal facilities in Idaho, were members of the Intermountain Operators' League, which combined with other employer leagues to form the Eleven Western States Policy Committee. This committee was formed in early 1958 to negotiate with the similarly constituted Teamsters Over-the-Road Negotiating Committee.

The terms of the employment contract due to expire in 1958 had been negotiated on a local basis between the Intermountain Operators' League and Joint Council 67. It had been agreed, however, that the 1958 negotiations in behalf of line drivers would be conducted on the 11-State basis to work out terms of a master agreement, with supplemental agreements later

[8] *United States* v. *Murdock*, 284 U.S. 141 (1931).
[9] *Sweezy* v. *New Hampshire*, 354 U.S. 234 (1957).
[10] *Ankrum* v. *Employment Security Agency*, 361 P. 2d 795 (1961).
[11] *Teamsters, Chauffeurs* v. *Board of Review*, 348 P. 2d 558 (1960).

negotiated locally. In March, the union requested that negotiations on terminal employees' contracts also be conducted on the 11-State basis, but the trucking companies expressed a desire that these negotiations continue to be on a local basis. When the union presented the same request on May 1, the operators asked that the Western Conference of Teamsters be identified in the contract. The union agreed, and the operators consented to negotiate simultaneously for terminal employees and line drivers.

On May 27, 1958, a memorandum of agreement between the bargaining committees was submitted to the individual employers and local unions for approval. Its terms included pay increases for line drivers and terminal employees and a 40-hour week for pickup and delivery workers in Utah and Idaho. The operators approved the agreement, but some local unions rejected it. Union negotiators proposed additional concessions, but the operators refused to negotiate further, maintaining that an agreement had been reached by bargaining and they were willing to execute it. The operators also notified union representatives that a strike against any member of the trucking association would be considered a strike against all members.

Joint Council 38, representing terminal employees in the Sacramento Valley, had attempted unsuccessfully to bargain separately with the California Trucking Associations, primarily to achieve wage parity with workers in the San Francisco area. When the memorandum of agreement was presented to Joint Council 38 for supplemental negotiations, the clerical workers accepted it, but all other terminal employees rejected it. Further negotiations were unsuccessful; Joint Council 38 authorized a strike, and on August 11, 1958, all terminal employees except clerical workers did strike. Thereupon, members of the employer association throughout the 11-State area locked out all nonstriking employees represented by the Teamsters, including the Idaho workers affiliated with Joint Council 67.

The Idaho workers were denied unemployment insurance under the labor dispute disqualification provisions of the Idaho unemployment insurance law,[12] and this determination was upheld on review by the Industrial Accident Board. The claimants, in appealing the board's order to the Idaho Supreme Court, contended, in essence, that the Idaho claimants were not unemployed because of a labor dispute since the strike in California was local and not a general labor dispute in the 11 States. The claimants also asserted that there was insufficient evidence in the record to support the board's findings.

The Idaho court, however, stated that the claimants were unemployed because of a work stoppage incident to a labor dispute. It then stated the essential issue was whether or not the claimants came within the exceptions to the labor dispute disqualification; namely, whether they participated in or were directly interested in the outcome of the dispute. The answer, the court held, depended upon whether the strike of Joint Council 38 was restricted to the California area or was a general dispute throughout the 11 Western States.

The court indicated that, despite conflict in testimony in the record, there was sufficient evidence to support the board's finding that although Joint Council 38 had attempted early negotiations on a local basis, the strike grew out of its rejection of the memorandum of agreement of May 1958 and that the strike and the lockout constituted a general labor dispute in the 11 States. The court pointed out that the problems of all the local unions involved, including Joint Council 38 and Joint Council 67, were not resolved until negotiations following the August 11 strike resulted in settlement in Washington, D.C., on September 18. These negotiations produced an entirely new master agreement and all local supplemental agreements executed in October 1958 embodied its terms, which were more advantageous to the claimants than the May agreement. The record before the Idaho court indicated that negotiations for the master agreement included bargaining as to all groups of employees on an 11-State basis.

[12] I.c. § 72-1366. (j) A benefit claimant shall not be eligible to receive benefits for any week with respect to which it is found that his unemployment is due to a stoppage of work which exists because of a labor dispute; *Provided*, That this subsection shall not apply if it is shown that—

(1) He *is not participating*, financing, aiding, abetting, or *directly interested in the labor dispute* which caused the stoppage of work; and

(2) He does not belong to a grade or class of workers of which, immediately before the commencement of the stoppage, there were members employed at the premises at which the stoppage occurs, any of whom are participating in *or directly interested in the dispute*. [Emphasis added.]

The claimants had relied on the recent Utah case [13] arising from the same work stoppage in which the Utah claimants were allowed unemployment benefits. The Idaho court pointed out, however, that the Idaho labor dispute disqualification differed from that in the Utah law,[14] and that apparently the facts before the Idaho court differed from those before the Utah court. The Utah Industrial Commission had denied benefits to the Utah claimants on the basis that their unemployment was caused by a strike involving their group of workers. The Utah Supreme Court, however, found from the record before it that negotiations on terms of the contract for terminal employees had not been conducted on an areawide basis. It found that the strike by Joint Council 38 was for Sacramento workers to get wage parity with those in the San Francisco area, and the local dispute could have been settled without affecting the settlement for Joint Council 67. The Utah court stated that these councils were separate union groups without control over or responsibility to one another. On this basis, it reversed the commission's order and allowed benefits to the Utah claimants—members of Joint Council 67.

[13] See footnote 11.

[14] UCA 1953, 35-4-5 "(d) For any week in which it is found by the commission that his unemployment is due to a stoppage of work which exists because of a strike involving his grade, class, or group of workers at the factory or establishment at which he is or was last employed."

Chronology of Recent Labor Events

August 1, 1961

FIVE-PERCENT wage increases became effective for over 11,000 psychiatric technicians working in 14 California State mental institutions. New pay rates range from $325 to $395 a month, and the monthly minimum for trainees is $281.

August 4

A 3½-percent wage increase, retroactive to May 12, and improvements in fringe benefits were announced by the Boeing Co. for over 18,000 office employees in Florida, Kansas, and Washington. (See also p. 1122 of this issue.)

August 8

THE FEDERAL DISTRICT COURT in Philadelphia ruled, in *Goldberg* v. *Battles*, that section 601 of the Landrum-Griffin Act authorizes the Secretary of Labor to delegate his investigation and subpena powers under the act to the Commissioner of Labor-Management Reports, and that they may be further delegated to the Department of Justice or any other Government agency. (See also pp. 1111–1112 of this issue.)

August 9

EDWARD E. GOSHEN was named Director of the Bureau of Apprenticeship and Training, where he has worked for 24 years, by Secretary of Labor Arthur J. Goldberg.

August 10

THE National Labor Relations Board ruled that the proviso of the Labor Management Relations Act which permits publicity—other than picketing—to truthfully advise the public that "a product or products are produced by an employer with whom the labor organization has a primary dispute" is not limited to manufacturers but extends also to distributors of the products. For this reason, the Board held, a union's distribution of "do-not-buy" handbills in front of retail stores selling goods supplied by a wholesaler who had a dispute with the union was not illegal. The case was *Local 537, International Brotherhood of Teamsters* and *Lohman, d.b.a. Lohman Sales Co.* (See also pp. 1110–1111 of this issue.)

August 11

PRESIDENT JOHN F. KENNEDY signed a bill establishing the position of an additional Assistant Secretary of Labor, and on August 17, Esther Peterson, Director of the Department's Women's Bureau since last January (Chron. item for Jan. 21, 1961, MLR, Mar. 1961), was sworn into the new post.

August 14

THE NLRB asserted jurisdiction over a union-administered welfare fund which furnished services valued in excess of $50,000 annually to contributing employers who met the Board's jurisdictional standards. The services included the purchase of insurance for the employers' workers and the making of contracts with doctors and hospitals. The case, *Chain Service Restaurant, Luncheonette & Soda Fountain Employees, Local 11*, and *Local 153, Office Employes' International Union*, involved the fund's dispute with its own employees.

August 15

THE NLRB changed its procedures for jurisdictional disputes at missile sites and other defense establishments to reduce the period between the filing of charges and the Board hearing to 10 days and to eliminate the filing of briefs.

August 16

THE U.S. Court of Appeals in Cincinnati, reversing a lower court's decision, ruled that the Secretary of Labor, in exercising his power to subpena union records under the Landrum-Griffin Act, need not first establish that there is a reasonable basis for belief that the act has been or is about to be violated. Since Congress had rejected a proposal that the Secretary be required to show "probable cause," the appellate court ruled that the courts ought not to impose a similar restriction. The court upheld the constitutionality of the act's reporting provision—section 201—challenged by the unions involved on the ground that it dealt with internal union affairs, which were a purely local matter. The court said that collective bargaining is not the only union activity affecting commerce, and the commerce clause of the Constitution does not inhibit Congress in selecting means of bringing about desired conditions in the flow of commerce. The case was *Goldberg* v. *Truck Drivers Local 299, International Brotherhood of Teamsters.*

UNDER THE LEADERSHIP of James T. Luken, president of the Greater Cincinnati Teamsters Council 26, four Cincinnati locals with 4,000 members voted to disaffiliate with the International Brotherhood of Teamsters (Ind.). The Brewery Workers accepted the charter applications of two of these locals. (See also p. 1123 of this issue.)

MEMBERS of the Textile Workers Union of America ratified a 1-year contract, retroactive to June 5, with the Bigelow-Sanford Co. of Thompsonville, Conn., which provided wage inequity adjustments and higher hospital and sickness benefits. (See also p. 1119 of this issue.)

August 17

SECRETARY OF LABOR Arthur J. Goldberg issued determinations under the Public Contracts Act, finding that (1) the prevailing minimum wage rate in the manifold business forms industry is $1.39 an hour (superseding the present $1 rate for the specialty accounting supply manufacturing industry); and (2) those in the four branches of the paper and pulp industry range from $1.54 to $1.75 an hour (all formerly $1.11½). The new rates apply to employees working on Government supply contracts in excess of $10,000 negotiated on or after September 16, 1961. (The effective date was originally set for August 24, 7 days from the official publication date, instead of the usual 30 days, but was later extended since there had been no advance notice of the contemplated change.)

August 18

NINE TEAMSTER LOCALS in the San Francisco Bay area approved a 3-year contract with six employer associations providing a total wage increase of 18 cents an hour and improvements in fringe benefits for about 10,000 employees in the local trucking industry. The settlement signaled the resumption of negotiations by the Western Conference of Teamsters on behalf of an estimated 100,000 employees in 11 States, where wage parity with the bay area was reported to be an issue. (See also p. 1121 of this issue.)

August 23

THE Missile Sites Labor Commission issued a statement on industrial labor policy similar to that on construction labor (see p. 1012 MLR, Sept. 1961). In the interests of economical and efficient operations at missile and space sites, it recommended that collectively bargained wages, fringe benefits, and other employment conditions (including transfer of workers) be reasonable and not discriminatory in the light of national standards and policies and conditions usually applicable in similar situations. (See also p. 1122 of this issue.)

REDUCTION from a 42- to a 40-hour workweek without salary change for about 40,000 policemen, firemen, and other uniformed employees was approved by the Board of Estimate of New York City. In addition, overtime and vacation provisions were liberalized. (See also p. 1121 of this issue.)

August 24

THE U.S. Court of Appeals in Boston held that an employer was entitled to an injunction to restrain the Massachusetts Board of Conciliation and Arbitration from investigating the employer's dispute with a union, since the field was preempted by Federal legislation and the State law setting up the board was in conflict with the Federal labor policy. The court pointed out that whereas the Massachusetts statute's "obvious . . . purpose is to coerce agreement by invoking official action to mold public opinion . . . to the end of bringing . . . pressure . . . to bear to force a settlement," the national policy is "to encourage voluntary agreements freely arrived at after 'good faith' bargaining." The case was *General Electric Co.* v. *Callahan.*

THE Flight Engineers' International Association and National Airlines, Inc., signed an 18-month contract, the first agreement reached between the engineers and a major airline in 3 years. Terms include a wage increase and continuation of three-man jet crews—two pilots and one engineer having pilot training (but not on jets). Crew size and qualification is one of the major issues before a Presidential commission which was appointed after the engineers staged a wildcat strike 6 months ago. (See Chron. items for Feb. 23 and May 25, 1961, MLR, Apr. and July 1961; see also p. 1120 of this issue.)

August 26

HIGHER and extended supplemental unemployment benefits, a new short workweek benefit, and improved pension and insurance benefits were provided in an agreement in principle between the United Auto Workers and the American Motors Corp. These increases are to be financed by a profit-sharing plan, the first in the industry; if the company's earnings are insufficient to pay the increased costs, the deficit will be made up by reducing future annual improvement increases or changing their effective dates. Continuation of the cost-of-living escalator was also included in the new 3-year contract affecting 23,000 workers. (See also p. 1117 of this issue.)

August 28

AGREEMENT by Local 802 of the American Federation of Musicians and the Metropolitan Opera Association to submit their dispute over wages and other issues to arbitration assured a 1961–62 opera season. Secretary of Labor Arthur J. Goldberg will serve as arbitrator at the request of President Kennedy, the union, and the association. (See also p. 1122 of this issue.)

August 31

SWIFT & Co. and the Amalgamated Meat Cutters and Butcher Workmen tentatively agreed to a 3-year contract affecting about 5,800 employees in 15 cities. Wage increases totaling 19 cents an hour were provided at 10 locations (less in 5 southern plants), the cost-of-living escalator was continued, and layoff and displacement provisions were improved. (See also p. 1118 of this issue.)

MEMBERS of Local 66 of the Ladies' Garment Workers' Union ratified 3-year contracts with seven employer associations for 9,000 embroidery workers in the New York City area. Terms included raises of 10 cents an hour for pieceworkers and $3.50 a week for those paid on a weekly basis, and improved vacations and maternity benefits.

Developments in Industrial Relations*

Wages and Collective Bargaining

Automobiles. Agreements in principle on new 3-year contracts for employees of American Motors Corp. and General Motors Corp., represented by the United Automobile Workers, were announced in late August and early September. The tentative agreement between the UAW and American Motors, affecting about 23,000 workers, was announced on August 26.[1] Contracts at General Motors, Ford Motor Co., and Chrysler Corp. were to expire on August 31 but were extended to September 6. The UAW had set a strike deadline for that date at General Motors, but a few hours before the deadline, union and company negotiators reported that, in light of "significant progress," they had agreed to a further contract extension to September 11. On September 7, GM and UAW announced agreement on economic matters, "contingent upon the resolution of all matters, nationally and locally." However, the parties were unable to effect complete agreement on noneconomic issues (such as relief time) by September 11 and a strike began which initially shut down 92 plants employing 255,000 workers. The Ford and Chrysler contracts were extended to September 13.

The distinctive feature of the American Motors contract was a "progress sharing" fund into which the company will pay 10 percent of profits before taxes (computed on the balance remaining after an amount equal to 10 percent of stockholders' equity has been set aside) to be used for increased benefits for hourly rated workers, and an additional 5 percent to be used to purchase American Motors' stock for these workers. The UAW estimated that these provisions, had they been in effect during the company's 1959 and 1960 fiscal years, would have yielded 29.9 and 23.7 cents an hour per worker. Based on data for the first three quarters and estimates for the fourth quarter, the union said this year's figure would have amounted to about 9.6 cents. The fund is to be started by transferring $3 million from the jointly financed insurance fund. The profit-sharing arrangement goes into effect in the company's next fiscal year—that ending September 30, 1962.

The agreement incorporated into base rates 12 of the accumulated 17 cents an hour cost-of-living allowance and continued the quarterly escalator clause. The annual improvement factor increase of 2½ percent, with a minimum of 6 cents an hour, was also continued, representing a rise in wages of about 7 cents each year at American Motors.

A variety of benefits were liberalized, with the cost of the changes reportedly to be paid from the new fund. Employee contributions of half the cost of hospital and medical insurance, as well as half the cost for retired workers, would be assumed by the fund, and life insurance and accident and health benefits were to be substantially increased, with the fund paying a larger share of the premiums. Effective January 1, 1962, pensions would be liberalized considerably, including an increase in normal retirement benefits to $2.80 a month for each year of service (instead of $2.50 for future service and $2.40 for most years of past service). Other benefits to be financed from the fund include a new moving allowance for workers transferred from one plant to another (ranging from $55 to $580 but applying only to moves of 50 miles or more). If the fund is inadequate to meet the cost of these benefit increases in any year, the deficit reportedly is to be made up by reducing future annual improvement raises or changing their effective dates.

In addition, the contract would improve the supplemental unemployment benefit program. It would raise benefits from 65 percent of normal take-home pay to 62 percent of straight-time pay before taxes (reportedly about 75 percent of the take-home pay) and provide a $1.50 a week allowance for each dependent up to four, increase maximum supplementary benefits to $40 from $30 a week, and lengthen duration of benefits from a maximum of 26 to 52 weeks. A new short work-

*Prepared in the Division of Wages and Industrial Relations, Bureau of Labor Statistics, on the basis of published material.

[1] The company's original proposal is presented in the September issue of the *Review* (p. 1008).

week benefit would provide pay at 50 percent of the regular hourly rate for each hour lost below 40 in the event of unscheduled short workweeks and 65 percent for most scheduled short weeks. The company would pay the cost of any scheduled short workweek benefits. All other increases in supplemental unemployment benefits would be financed from the SUB fund.

The company said later that its 4,000 salaried employees would also be eligible to participate in a profit-sharing plan "at least as liberal" as the one with the UAW. In addition, salaried employees received, effective September 1, a 3-percent pay raise, plus incorporation into base pay of $20.80 of their quarterly cost-of-living float, and a cost-of-living increase of $5.20 for the quarter ending November 30, 1961.

Preliminary accounts indicated that contract improvements at General Motors were generally similar to those in the American Motors agreement except for the omission of the stock purchase provision and for differences in methods of financing the increased benefits. The General Motors' settlement provided that 2 cents of the first year's annual improvement factor increase would be used to pay part of the company's cost of assuming the employees' share of hospital and medical care insurance and that the first 1-cent increase in the cost-of-living allowance would be used toward its outlay for increased pensions. The rest of the economic contract followed closely the American Motors' settlement, including continuation of the improvement factor raises and cost-of-living escalator clause (with 12 cents of the allowance incorporated into base rates), increased supplemental unemployment benefits, and the new short workweek benefit, increased life insurance, a moving allowance, and improved vacation, jury duty, and separation pay.

Meatpacking. The second major settlement during August occurred on the last day of the month when Swift & Co. and the Meat Cutters and Butcher Workmen reached tentative agreement on a 3-year contract affecting about 5,800 workers in 15 cities. It was the first agreement in current meatpacking negotiations. A number of other contracts scheduled to expire on August 31 had been extended indefinitely: included were those between Armour and Co. and the MCBW and the United Packinghouse, Food and Allied Workers; John Morrell with the MCBW and the Packinghouse Workers; and Swift & Co. with the Packinghouse Workers and the independent National Brotherhood of Packinghouse Workers.

The Swift agreement calls for general wage increases totaling 19 cents an hour over the contract period at a majority of the plants, but, as in 1959, smaller raises are to go into effect at southern plants. The cost-of-living escalator clause was continued. In 10 cities in California, Idaho, Illinois, Maryland, Nebraska, Ohio, Oregon, South Dakota, and Utah, pay raises amounted to 7 cents in the first year and 6 cents in both the second and third years. At the Nashville, Tenn., plant, a 7-cent raise went into effect immediately and 3-cent increases are scheduled for 1962 and 1963. At the remaining southern plants (Ocala, Fla., Montgomery, Ala., Moultrie, Ga., and Jackson, Miss.), the 7-cent raise was deferred until September 1962 and a wage reopener was provided in September 1963. In 11 cities, the spread between job rates was also increased by ½ cent (to 4½), which resulted in additional raises of up to 13 cents an hour for the top job classification.

Fringe benefit improvements consisted mostly of new or liberalized provisions for workers affected by plant or department shutdowns. They included optional retirement at full pension for employees between ages 55 and 60, transfer rights to other plants, company payment of moving costs for transferred employees, increased separation pay, extended hospital and surgical coverage for laid-off employees, and 90-day notice before a shutdown.

Other Manufacturing. A 2-day strike involving about 7,500 Chicago area dairy-worker members of Teamster Locals 754 and 753 ended on July 28, when the locals agreed on 2-year contracts with the Associated Milk Dealers, Inc. The agreement with Local 754, affecting about 2,500 plant workers, provided an 8-cent wage increase retroactive to May 1, 1961, and an additional 12 cents on May 1, 1962. Other changes included a 1-year reduction annually in the service requirement for 4 weeks' vacation, reaching 15 years instead of 20 by 1965; establishment of 6 paid holidays—2 in 1961 and 4 more in 1962; time and one-half for Saturday work as such; and double time instead

of time and one-third for Sunday work. The contract also called for the companies to increase their contribution to the health and welfare fund by 2 cents this year (to 11 cents) and by another 3 cents on May 1, 1962; and to pay an additional 4 cents into the pension fund beginning on September 1, 1961, and 7 cents more next May 1, bringing the total to 25 cents. Pension benefits to employees will be raised after May 1, 1962. The contract also provided job security for employees affected by the elimination of milk dating and guaranteed all employees their jobs to January 1, 1963, with no involuntary separations except for retirement or disability. The contract with Local 753, representing 5,000 drivers, provided for a wage increase of $4.80 a week retroactive to May 1 and an additional $3.20 in the second year. Vacations were liberalized and employers also agreed to increase their payments to the health and welfare and pension and severance funds.

About 3,000 members of the Lewiston and Auburn Protective Association (Ind.) were to receive a 5-cent-an-hour wage increase in October, under an arbitration award announced in mid-August. The award, made under a reopening provision of the contract negotiated last December with the Auburn Shoe Manufacturers Association, also called for a seventh paid holiday effective in 1962 and 1 day of paid funeral leave.

Two major carpet manufacturers and the Textile Workers Union of America signed 1-year contracts in late July and August for about 3,600 workers. In Amsterdam, N.Y., Mohasco Industries, Inc., and the union agreed upon a contract that provided for no general wage increase but improved fringe benefits. The settlement, affecting about 2,800 employees, called for lump-sum payments of $400 to $500 to retirees (30 days after retirement) and continuation of life insurance at no cost for those retiring at or after age 60. The company-paid life insurance for all employees was increased by $250 to $1,500, with coverage for laid-off workers continued as long as 5 months. In Thompsonville, Conn., the Bigelow-Sanford Co. and the TWUA, representing 800 employees, contracted for wage inequity adjustments in some jobs, ranging from 4½ to 10 cents an hour, and increases in weekly sickness and daily hospital benefits.

In late July, a number of furniture manufacturers in Virginia and North Carolina announced plans to increase wages by 4 to 5 percent. Some increased wages a flat 5 cents an hour, and others gave graduated adjustments. The companies included Thomasville Chair Co. (a division of Thomasville Furniture Industries, Inc.), Dixie Furniture Co., Link-Taylor Furniture Co., United Furniture Co., and Philpott Furniture Co.—all in Lexington, N.C.—and American Furniture Co. in Martinsville, Va.

Other southern furniture manufacturers were reported to have increased wages for lower paid workers in June and July to the new Federal minimum of $1.15, which went into effect on September 3.

The Kohler Co. on August 16 announced a 3-percent general pay increase for its hourly, incentive, and salaried (except executive) employees, the company said, "in accordance with its long established policy of keeping its wages in line with general wage levels and with increases in the cost of living." The increase went into effect on August 28 for production workers and on September 1 for office employees. An attorney for the United Automobile Workers claimed the increase was "a clear violation of [the company's] duty to bargain with the union." In August 1960, the National Labor Relations Board had found the company guilty of unfair labor practices in a 6-year strike by the UAW and ordered it to reinstate some strikers and bargain in good faith.[2]

The Lockheed Aircraft Corp., California Division, on August 7 negotiated a 2-year contract with the Engineers and Scientists Guild (Ind.) providing pay raises averaging about $7 a week for salaried employees and wage increases of 7 to 21 cents an hour for technicians. The contract, affecting about 2,800 engineers, scientists, and technical employees in Burbank and Palmdale, Calif., may be reopened on wages and fringe benefits in 1962.

Railroads. Eleven nonoperating rail unions, bargaining for 600,000 workers on August 31 announced that the next day they would serve notices to the Nation's railroads that they would seek a 25-cent-an-hour wage increase effective

[2] Both union and company appeals from the NLRB ruling were still pending. See *Monthly Labor Review*, October 1960, p. 1096.

November 1, 1961, when existing contracts are subject to amendment. George E. Leighty, president of the Railroad Telegraphers and chairman of the joint negotiating committee,[3] said the unions felt the increase was needed to correct "the present wage inequity" among railroad workers resulting from the wage provisions of the 1956 agreement and the "disappointing" settlement concluded in 1960. (That settlement provided a 5-cent-an-hour wage increase, improved fringe benefits at a management-estimated cost of 6 cents an hour, and discontinued cost-of-living escalation.[4]) The unions also said they would demand not less than 6 months' notice of layoffs (other than those under specified emergency conditions).

Maritime. The possibility of a major resumption of the East and Gulf Coast maritime strike [5] ended in late August when the International Organization of Masters, Mates and Pilots reached contract agreement with 15 tanker companies represented by the Tanker Labor Service Committee and operating about 80 tankers. The 4-year agreement called for a 4-percent increase in basic wages and the other earnings retroactive to June 15, as well as additional 2¼-percent increases effective on that date in each of the following 3 years. Other provisions included improved pension and welfare benefits and the addition of a fourth mate on deep-sea tankers operated by the Military Sea Transportation Service but under charter to private companies.

Also during the month, the Marine Engineers Beneficial Association, bargaining for licensed engineers, had reached separate agreements with tanker and major East Coast dry cargo and passenger shipping companies. These 3-year agreements, like a settlement reached earlier by the Engineers with the Pacific Maritime Association, provided for no immediate wage increase but improved pension, vacation, and welfare provisions. Maximum increases of 3½ percent—to be allocated to either wages or fringe benefits—are to be effective in both 1962 and 1963.

Settlement on bargaining rights for crews of vessels sailing under "flags of convenience"—one of the major issues in the dispute—was postponed in some agreements by committee referral; the Marine Engineers' bargaining agreements with the tanker companies called for the establishment of a union-management committee to study the issue for 18 months, and the National Maritime Union had agreed to put this matter before a public factfinding board under the auspices of the Secretary of Labor. In some of the contracts covering South Atlantic and Gulf ports, the Seafarers and the MEBA won the right to organize foreign-flag vessels operated by companies that also operate U.S.-flag ships.[6]

The Pacific Maritime Association and the International Longshoremen's and Warehousemen's Union (Ind.) in late July negotiated a liberalized pension program covering about 16,000 ship clerks and longshoremen. Improvements included a $15-a-month increase in the normal and disability retirement benefits (to $115) and liberalized eligibility requirements for disability retirement. Negotiations were concluded under a reopening provision of a 5½-year contract expiring in 1966.[7] Wages were not an issue, ship clerks and longshoremen having received 8¼- and 6-cent pay increases, respectively, in June.[8]

Other Transportation. The Flight Engineers' International Association and National Airlines, Inc., in late August signed an 18-month contract providing the company's 125 engineers the highest pay scales in the industry, the union said. The contract, retroactive to July 1, provided monthly pay scales ranging up to $1,658 a month on DC–8 jets (formerly $1,445), and up to $1,336 on Electra turboprops (instead of $1,146). The contract also provides for continued use on jet flights of a three-man crew including a flight engineer not qualified as a jet pilot—one of the major issues between the FEIA and the Air Line Pilots Association concerning qualifications and jurisdiction of the flight engineer post and one that is being studied by a Presidential commission. At the same time, an official of National announced that the company had withdrawn from

[3] Other participating unions are the Boilermakers, Brotherhood of Electrical Workers, Firemen and Oilers, Hotel and Restaurant Employees, Machinists, Maintenance of Way Employes, Railroad Signalmen, Railway Carmen, Railway Clerks, and Sheet Metal Workers.

[4] See *Monthly Labor Review*, October 1960, p. 1092.

[5] See *Monthly Labor Review*, August 1961, pp. 885–886.

[6] Ibid.

[7] See *Monthly Labor Review*, January 1961, pp. 1–10.

[8] See *Monthly Labor Review*, August 1961, p. 886.

the mutual assistance pact with eight other airlines[9] because of disagreement over methods of determining benefits for members shut down by a strike.

In the San Francisco Bay area, nine Teamster locals representing about 10,000 local cartage and drayage truckdrivers ratified on August 18 a 3-year contract with a number of employer associations, including the California Trucking Association and the Draymen's Association of San Francisco. Settlement was reached after the locals involved had decided to separate themselves from negotiations currently taking place between the Teamsters and a number of trucking associations covering approximately 100,000 employees in 11 Western States.

The San Francisco agreement provides increases of 7 cents an hour retroactive to July 1, and 6 cents and 5 cents in the second and third years, respectively. A cost-of-living escalator was also included. Improvements in fringe benefits were designed mainly to reduce differences among the nine locals involved. These included a ninth paid holiday, 4 weeks' vacation after 10 years' service, and increased employer payments to health and welfare funds (not to exceed a total of $16.50 a month per worker) and 5 cents an hour additional to pensions.

In Local 85, where 4 weeks' vacation after 10 years' service and 9 paid holidays previously existed, members may use approximately 10 cents an hour to improve fringe benefits except holidays, vacations, or paid sick leave. Rates of pay for Local 85 drivers previously ranged from $3.00 to $3.25 an hour.

Retail Trade. Late in July, major drugstore chains located in southern California concluded agreements with several locals of the Retail Clerks' International Association, representing approximately 5,000 workers. The contracts provided hourly wage increases of 33 cents for clerks and $1.12½ for pharmacists over the 5-year contract period. Clerks received 5 cents retroactive to July 1, and were to get 7 cents more each January 1 through 1965. For pharmacists, the July 1, 1961, increase amounted to 20 cents, with the 92½-cent balance to be apportioned semiannually in varying increments starting January 1, 1962, which will yield $6 an hour on January 1, 1964. For clerks only, annual cost-of-living adjustments, beginning July 1, 1962, have a ceiling of 23 cents an hour over the contracts.

Communications. The Communications Workers of America and three Bell System affiliates—the Mountain States Telephone & Telegraph Co., the Pacific Telephone & Telegraph Co., and the Southwestern Bell Telephone Co.—reached agreements on new wage scales covering about 72,000 workers. The agreements, similar to those negotiated earlier this year with the CWA and other Bell System companies,[10] provided wage increases of $1.50 to $3 a week under reopening provisions of 3-year contracts signed in 1960. They affected approximately 12,000 plant and accounting employees of Pacific Telephone in southern California, about 14,000 plant and traffic employees of Mountain States Telephone in a seven-State area, and 46,000 Southwestern Bell employees in six States.

Government and Services. The State of California gave a 5-percent pay raise on August 1 to more than 11,000 psychiatric technicians in 14 State mental institutions. New monthly rates of pay range from $325 to $395, and the minimum rate for technician trainees is $281.

Two actions involved New York City employees. The Board of Estimate of that city on August 23 approved a plan to reduce the workweek from 42 to 40 hours for about 40,000 policemen, firemen, and correction and transit authority officers, effective September 10. (Most other city employees are already on a 40-hour week.) The shorter hours, with no change in basic salaries, are expected to cost the city $10 to $12 million a year. In addition, the board approved a liberalized overtime provision and, effective in January 1962, 27 days' annual vacation after 3 instead of 8 years' service. The latest general salary increase for the city's uniformed employees was in January 1960, when they received a $100 yearly raise.

In late July, the city had agreed with the Uniformed Sanitationmen's Association on a new contract for 10,000 sanitation workers. The con-

[9] See "Mutual Strike Aid in the Airlines," *Monthly Labor Review*, June 1960, pp. 589–591.

[10] See *Monthly Labor Review*, July 1961, p. 775.

tract called for an annual pay increase of $191, retroactive to July 1, and an additional $191 on January 1, 1962. Further increases in take-home pay resulted from the city's assuming part of the employees' contribution to the pension fund. The contract also provided for switching workmen's compensation coverage from the State program to a city plan, similar to that for the city's policemen and firemen, with consequent liberalization of benefits.

The 1961–62 New York opera season was assured when the Metropolitan Opera Association and Local 802 of the American Federation of Musicians agreed on August 28 to accept final and binding arbitration by Secretary of Labor Arthur J. Goldberg of unresolved contract issues for 92 orchestra members. Mr. Goldberg announced that his role in connection with "a great cultural resource of the . . . Nation" would "not establish a precedent of general economic application." The association, which had announced cancellation of the season, proposed a 3-year contract providing a minimum salary of $175 a week this year and $180 for the final 2 years (the minimum is currently $170.13). The union's latest demand called for a weekly minimum of $220.13 and a reduction in weekly performances from seven to six.

Construction. An 8-week strike that idled over 50,000 construction workers in New York City ended on August 25 when members of the Teamsters union, representing 1,200 concrete truckdrivers, ratified a 2-year contract with the Building Trades Employers Association. The contract calls for a 50-cent-an-hour package increase, to be distributed among wages and fringe benefits at the membership's option. Wages before the strike were $3.50 an hour.

The Associated General Contractors' Portland chapter and the International Union of Operating Engineers, Local 701, agreed in mid-August to a 3-year contract for 5,000 workers in Oregon and southwest Washington. The settlement, preceded by a 7-week strike, provides for wage increases totaling 60 cents an hour over the contract term. Rates were increased 20 cents retroactive to June 1 with additional 20-cent advances scheduled for June 1 of 1962 and 1963. Effective September 1, employers will also contribute 13 cents per man-hour, instead of 10 cents, to the health and welfare fund.

Salaried Employees. The Boeing Co. on August 4 announced a 3½-percent salary increase, retroactive to May 12, for more than 18,000 office employees in Seattle, Wash., Wichita, Kans., and Cape Canaveral, Fla. The company also gave them an improved vacation-sick leave-severance pay program similar to that for 40,000 production workers under the 1960 contract with the International Association of Machinists,[11] that also provided deferred wage increases of 4½ to 8 cents an hour effective August 11.

The United States Steel Corp. in mid-August announced a 6-percent salary increase effective September 1 for "certain groups of supervisory and general management employees." The increase was reported to cover several thousand personnel. It was their first general pay increase in 3 years. (The company's nonsupervisory salaried and office employees last December got raises generally equivalent to those for production workers under the contract with the Steelworkers.)

Several days later, the Allegheny-Ludlum Steel Corp. announced a 7-percent salary increase effective September 1 for 2,000 office and supervisory employees who are exempt from the overtime provisions of the Fair Labor Standards Act. Youngstown Sheet & Tube Co. said it would give a 6-percent raise to 2,000 exempt salaried employees. In both cases, the raises also were the first for these employees since September 1958.

Rulings and Decisions

On August 23, the Missile Sites Labor Commission informed the Secretary of Defense that it found "unreasonable and discriminatory" certain wage rates at missile site construction projects around Forbes Air Force Base near Topeka, Kans. (Shawnee County). The Commission's findings arose from an examination of wage agreements between the International Hod Carriers', Building and Common Laborers' Union and the Topeka division of the Associated General Contractors of America, Inc. The agreement, the Commission found,

[11] See *Monthly Labor Review*, October 1960, p. 1092.

called for the same wage scales as those paid in Topeka for "all building work contracted by an agency of the Federal Government" even though private construction scales for comparable jobs in three counties surrounding Topeka—which in effect constituted a labor market—were more than 10 percent below Topeka rates. The Department of Defense could disallow the difference in wage costs for purposes of reimbursement.

In a separate decision announced on the same day, the Commission upheld a hazard pay provision for electrical work at Vandenberg Air Force base as "reasonable." That provision had, since 1950, been in agreements between a local of the International Brotherhood of Electrical Workers and the Santa Clara-San Benito chapter of the National Electrical Contractors Association, and the Commission found it applied only to actual hours of exposure and only to crews working under stipulated conditions. The Commission stated that the provision "regularly applied to private construction work in the area, including derricks, oil refineries and other work," and similar provisions were "widely included in collective bargaining agreements in the electrical branch of the construction industry."

The Commission on August 23 also issued an industrial labor policy statement for missile and space sites similar to one announced in July covering construction work.[12] Its chief recommendations were that agreements covering wage rates, fringe benefits, and working conditions be in line with those provided for nongovernmental work; that in establishing rates for new jobs consideration be given to existing national standards; and that procedures and conditions concerning the transfer of trained personnel be consistent with generally applicable standards. The Commission said it was currently reviewing "applicable collective bargaining agreements and their practices to determine whether [recently established provisions] are at variance with sound policies and practices."

In a related development, the National Labor Relations Board on August 15 put into effect procedures to speed up its handling of jurisdictional disputes at missile sites and other defense establishments. It reduced to 10 days the period between the filing of charges and a Board hearing, and eliminated the filing of briefs except for good cause.

In Cincinnati, the U.S. Court of Appeals on August 16 reversed a lower court decision by ruling that the Secretary of Labor was not required to show probable violation of the Labor-Management Reporting and Disclosure Act to obtain court enforcement of a subpena of union records. The decision arose from a Labor Department investigation of reports on organization and finances filed by Teamster Local 299 (home local of Teamster President James R. Hoffa) and Local 614. The three-judge court ruled that Congress had intended such investigations "to provide the means of discovery whereby the Secretary could determine whether the act was being violated, or [was] about to be violated."

Union Developments

Teamsters. Members of four Cincinnati locals of the International Brotherhood of Teamsters, representing some 4,000 workers, on August 16 voted overwhelmingly to withdraw from the parent union and to affiliate with the AFL–CIO. Leader of the revolt was James T. Luken, president of the Greater Cincinnati Teamsters Council 26 and of one of the four locals, who unsuccessfully opposed the election of President James R. Hoffa last July. Two locals voted to join the Brewery Workers Union; their application was immediately accepted by President Karl F. Feller, who pledged full support against Teamster efforts to prevent the transfer. AFL–CIO President George Meany said he "heartily welcomes" the revolt and stated that AFL–CIO Regional Director William L. Kircher would be available "for any cooperation and assistance that he can give."

Following the vote, the international moved to place the locals under trusteeship and petitioned a Cincinnati Common Pleas Court for a temporary injunction against the disaffiliation move, alleging it was illegal and violated the international's constitution. On August 24, Judge Charles S. Bell issued a temporary order against spending by the locals for anything but "normal expenses," but refused to allow the appointment of Teamster Executive Vice President Harold Gibbons as

[12] See *Monthly Labor Review*, September 1961, p. 1012.

trustee, stating the time for arguing the merits of trusteeship would come when the issue of a permanent injunction arose.

Elsewhere a few other Teamster locals announced their intention to disaffiliate. In addition to Chicago taxicab drivers, who last July rejected the Teamsters in a NLRB election,[13] some 200 cabbies in St. Louis voted to disaffiliate, and small locals in Middletown, Ohio, and Sikeston, Mo., were also reported to have seceded. In Philadelphia, a dissident group of the 14,000-member Local 107 (where President Ray Cohen had been accused by the McClellan committee of misuse of union funds) formed a Committee for Labor Reform.

A mutual assistance pact between the Teamsters union and the International Union of Mine, Mill and Smelter Workers went into effect on August 18, 1961. The agreement provided for joint organizational projects, mutual support and assistance in collective bargaining, and cooperation in legislative efforts "beneficial to the parties and the interests of organized labor."

Mergers. The AFL–CIO announced on September 1 that agreement had been reached on merging the New Jersey State AFL and CIO organizations and that amalgamation would formally take place at a special convention on September 25. New Jersey was the only State where separate labor bodies had failed to combine after the AFL and CIO were merged in 1955; negotiations between the State organizations had collapsed last year. Outstanding areas of disagreement were submitted to AFL–CIO President George Meany for binding decision. The State AFL is to name the president and secretary-treasurer and 25 members of the executive board, and 2 executive vice presidents and 12 board members are to be chosen by the CIO. The AFL group claimed about 280,000 members and the CIO about 120,000.

The presidents of the Brotherhood of Railroad Trainmen and the Order of Railway Conductors and Brakemen (Ind.) announced on August 30 that a majority of the unions' members had ratified by mail referendum a proposal to merge the two unions. The unions' boards of directors had previously approved plans for amalgamation and were working on plans for the formal merger.[14] The new union, with a combined membership of about 225,000, will perpetuate the Trainmen name.

[13] See *Monthly Labor Review*, September 1961, p. 1011.
[14] See *Monthly Labor Review*, February 1961, p. 184.

Book Reviews and Notes

EDITOR'S NOTE.—*Listing of a publication in this section is for record and reference only and does not constitute an endorsement of point of view or advocacy of use.*

Special Reviews

How To Get the Most Out of Medical and Hospital Benefit Plans—A Program for Labor and Management. By Ruth and Edward Brecher. New York, Foundation on Employee Health, Medical Care, and Welfare, Inc., 1961. xxii, 166 pp. $2.

This book is another of the series of publications of the Foundation on Employee Health, Medical Care, and Welfare organized jointly in 1956 by U.S. Industries and the International Association of Machinists. Those familiar with the earlier studies will find that this one represents a distinct break with the previous pattern both in length and in approach. The other publications of the Foundation could be described as straightforward expository statements of a type indicated by their titles; e.g., *Service Benefits—and How To Compare Service vs. Indemnity Benefits.* The present book is more ambitious in scope and enters into the controversial area of potential group action to influence the organizational and financial aspects of the medical care industry.

The preface states that this book "grew out of" a conference of representatives of management, labor, and prepayment and medical care groups held at Arden House in 1960. It is not, however, a collection of papers from the conference nor a report of the proceedings. The material is organized around these major topics: A discussion of hospital benefit problems; a description of the mechanism of providing medical benefits through indemnity policies, Blue Shield, and comprehensive and supplementary major medical policies; a review of some problems and solutions of issues growing out of medical benefit plans and a brief description of independent plans.

More than two-thirds of the book is devoted to the discussion of the problems of hospital insurance and the description of the various techniques of providing medical benefits. The presentations at the conference are used to document and to illustrate the points made in the text. The range of topics is broad, the material is apt and timely, and the book as a whole provides a useful introduction to the major problems of employee health insurance and a review of some of the wide variety of experiments being tried in dealing with these problems. Considering the brevity of the book, it is no surprise that the various topics are not treated as thoroughly as might be desired, but there are few people who will not learn something new from a reading of this publication. While the great bulk of the material is included in the Somers' much more comprehensive book entitled *Doctors, Patients, and Health Insurance: The Organization and Financing of Medical Care*, the book under review is aimed at a different audience and is intended for a different purpose.

The departure from the approach taken in the earlier publications of the foundation comes in the form of an "action program" for employee benefit plans to follow in pursuing their goal of financing health services for their members. The distinctive feature here is the forthright advocacy of this program. The Foundation proposes that employee benefit plans in various localities organize themselves into "employee benefit plan councils" in order to deal in concerted fashion with health insurance problems. In practice, this is likely to mean establishing a sort of collective bargaining relationship with the various interest groups involved, i.e., medical societies, hospital boards, prepayment plans, etc. Suggestions on the potential role of these councils occur frequently throughout the text, the concluding chapter consisting of a checklist of possible council activities. In addition, benefit plans considering the formation of such local councils are requested to inform the Foundation, which offers "to act as a preliminary clearinghouse for bringing such councils, or groups wishing to form councils, into touch with one another."

Although this represents a change from the former relatively antiseptic attitude of the Foundation, it is not a new idea. For example, groups

similar to the proposed councils have functioned in some localities (notably Los Angeles), the American Labor Health Association had some of the same aims, and various State, county (e.g., San Francisco), and trades councils of the labor movement have tried to act as bargaining representatives for the consumers of medical care. If there is anything unique about the Foundation's offer, it is the possibility that it might mark the growth of employer interest in this approach. Previous action in this area has tended to be dominated by the labor movement and its often controversial leaders. These efforts have not been without effect, but if a movement of *employee benefit* plan councils with active employer participation should replace the almost exclusively labor council approach of the past, the results might be impressive.

In any event, the contents of this book furnish the person looking for a succinct overview of the current status of employee health insurance with a good deal of current information in easily accessible form.

—JOSEPH W. GARBARINO

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Legal Protection of Private Pension Expectations. By Edwin W. Patterson. Philadelphia, University of Pennsylvania, Wharton School of Finance and Commerce, Pension Research Council, 1960. 286 pp. $6.75, Richard D. Irwin, Inc., Homewood, Ill.

Legal Status of Employee Benefit Rights Under Private Pension Plans. By Benjamin Aaron. Philadelphia, University of Pennsylvania, Wharton School of Finance and Commerce, Pension Research Council, 1961. 130 pp. $5, Richard D. Irwin, Inc., Homewood, Ill.

It has been estimated that at the present time more than 20 million American workers are covered by approximately 25,000 private pension plans with funds of $42 billion. If one adds to the number of such workers those others who are also relying on such funds as a source of future economic security, the total number depending on the benefits promised skyrockets to nearly 85 million persons. As the number of these plans increases, as indeed it is, so do the funds and the persons dependent upon them increase. The question of whether the expectations of these people will be met by private pension plans is one of great national concern. In recognition of this problem, the Wharton School of Finance and Commerce of the University of Pennsylvania established in 1952, the Pension Research Council. In 1958, the council inaugurated a study of the factual basis of benefit expectations under private pension plans. That study has been divided into four parts: (I) the present regulation of private pensions at both the Federal and the State levels; (II) the problem of measuring and enforcing actuarial soundness in pension plans; (III) the legal bases of employee rights under such plans; and (IV) the functions involved in the establishment and operation of a private pension plan.

For each of these studies, a task force was set up to investigate the problem, the chairman of each group assuming the responsibility of preparing a report of his findings. Professors Patterson, and Aaron have written reports as the respective chairmen of task forces I and III.

Professor Patterson's book presents a comprehensive survey of the extent and the manner in which governmental regulations at the present time afford and advance the expectations of pension holders and their dependents. After a discussion of the available legal controls, in which he demonstrates that some of the factors upon which pension expectations will depend, such as inflation, are not subject to legal controls, Professor Patterson presents a comprehensive legal analysis of pension plans, covering the main plan provisions and the legal responsibility of those who establish, provide advice for, and administer pension plans. The pedagogical preliminaries dispensed with, the author turns to the heart of his subject, an exposition and critique of the existing methods and sources of authority providing pension plan regulation.

While finding that those provisions of the Internal Revenue Code permitting tax deductions for qualifying plans has encouraged the establishment of plans and employer relinquishment of the control of pension funds, and has provided generally for greater legal commitments than that offered by some older plans, he also finds that the authority of the Internal Revenue Service in this area is limited, as consequently are the safeguards provided. The code offers no provision for insuring timely employer contributions, actuarial soundness, or sound investments. The

Welfare and Pension Plans Disclosure Act of 1958, administered by the U.S. Department of Labor, Professor Patterson finds to be, though comprehensive in scope, "weak in even its limited disclosure requirements and wholly lacking in substantive standards or requirements."

Since a vast number of all funded pension plans are funded through insurers, Professor Patterson's conclusion that under present State regulation such insured plans provide adequate safeguards for actuarial soundness and for the fulfillment of accrued obligations is heartening. With the exception of certain State and Federal regulation of trust companies, the general status of other State regulation of pension plans is, he concludes, in many significant respects less than adequate.

As part of a minimum program of legislation, Professor Patterson recommends that the Welfare and Pension Plans Disclosure Act be amended to provide for full reporting and disclosure with regard to the sufficiency of funding to produce projected benefits. He further recommends that Federal or State agencies be empowered to examine the books and records of any funded pension plan to determine the accuracy of reports submitted.

Although Professor Aaron's report is narrower in scope than Professor Patterson's comprehensive survey and covers some aspects of the same ground, it does provide a succinct and interesting examination of how arbitrators, the National Labor Relations Board, and our courts (State and Federal), have viewed a variety of questions presented to them concerning pension plans and rights arising under such plans. Professor Aaron investigates the status of plans established unilaterally by employers and those forged at the bargaining table. He then examines how those and other factors affect the enforcement of benefit claims.

Whether instituted at the largess of the employer or established through collective bargaining, a host of factors affect the rights and expectations of employees under pension plans. Discharge layoff, expulsion from a union, compulsory retirement, bankruptcy, merger, and others are all discussed by the author in a cogent survey of the growing body of case law, arbitral awards, and Board decisions.

Believing that the greater threats to pension expectations lie in "poor drafting of plan instrument, inadequate funding, and unwise investment policies" rather than "dishonest or negligent administration of pension funds," Professor Aaron concludes that with certain limited exceptions, further governmental regulation of private pension plans would be undesirable. Thus, his recommendations as to such further regulation are limited to (1) providing a covered employee the right to bring suit in a Federal court against an employer for required payments into a welfare or pension fund; (2) amending the Bankruptcy Act to place payments to such funds on a par with wages under the act; and (3) providing for the vesting of pension rights of the employees of merged companies.

Although Professors Patterson and Aaron have not reached identical conclusions in their recommendations, they have provided valuable surveys of the law affecting private pension plans. These works will doubtlessly provide guidelines for and serve as stimuli to future reseachers in the field.

—Norman L. Holmes
Office of the Solicitor
U.S. Department of Labor

Jurisdictional Disputes in Construction: The Causes, the Joint Board, and the NLRB. By Kenneth T. Strand. Pullman, Washington State University, Bureau of Economic and Business Research, 1961. 197 pp., bibliography. $5, Washington State University Press, Pullman.

Disputes over jurisdiction are among the most complex and least understood in the area of union-management relations. After 14 years, significant uncertainties and urgent problems remain regarding the application of the Labor Management Relations Act to jurisdictional issues. Dr. Strand's comprehensive analysis of jurisdictional disputes in the construction industry, their causes and the methods of handling, represents a valuable contribution which should interest both the specialist and the general reader.

Among the underlying causes of jurisdictional disputes in the United States, according to the author, are the absence of class consciousness and the development of a concept of exclusive jurisdiction. However, "the employment scarcity explanation offers the best single interpretation of the underlying causes." Important specific causes of disputes include overlapping jurisdictional

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claims and skills, aggressive policies of some unions, and changes in methods, machinery, and materials. The latter adds a dynamic dimension to the problem.

As background, the author traces the legislative history of the LMRA provisions most pertinent to these disputes, sections 8(b)(4)(D) and 10(k), and describes the development of the National Joint Board for Settlement of Jurisdictional Disputes, the construction industry's present dispute settlement tribunal. Certain premises are set forth as a basis for the evaluation of settlement procedures: (1) Jurisdictional conflict is inevitable; (2) such disputes may be legitimate, i.e., unions may seek to protect members' employment opportunities; (3) strikes over such disputes are unwarranted; (4) strikes over jurisdiction will continue unless a substitute is found; (5) the acceptance of the union concept of "job ownership" by contractors and other agencies involved is necessary if jurisdictional strikes are to be avoided; (6) in establishing "job ownership," the following represent insufficient "certificates of title": (a) federation charter grants of jurisdiction, (b) union jurisdictional claims, and (c) contract clauses which "award" jurisdiction (certain specialty contractors may share a union's interest in expanding jurisdiction); (7) all parties at interest should have a voice in the settlement procedure; (8) the procedure must provide for prompt awards and a method of enforcement; (9) the industry (unions and employers) lacks the enforcement powers to provide an effective method of accommodation; and (10) "separately, neither of the two existing systems, the National Labor Relations Board and the Joint Board, meets all the necessary conditions for a method of accommodation," the Board being too slow and lacking in "the necessary expert knowledge" and the Joint Board lacking enforcement powers. "Accordingly, the LMRA should be administered in such a manner as to strengthen the Joint Board."

The author disagrees with the NLRB's decision not to issue affirmative jurisdictional awards. "On balance," he states, "the conclusion that Congress intended the Board to issue affirmative awards under section 10(k) seems warranted." However, this issue recently lost much of its significance when in January 1961, in *NLRB v. Radio and Television Broadcast Engineers Union, Local 1212, IBEW*, the U.S. Supreme Court rejected the NLRB's policy of nonaffirmative awards and held that the Board must decide "which of two or more employee groups claiming the right to perform certain work tasks is right and then specifically to award such tasks in accordance with its decision." The findings of this study are worthy of serious consideration as the Board approaches the task of developing criteria for affirmative awards. One interesting suggestion was that criteria for jurisdictional awards might vary among industries depending upon industry practice.

One might well argue that much of the author's criticism of NLRB decisions is misdirected. The vagueness and ambiguities of the relevant provisions of the statute—a document which has been described as "not widely admired for its luminous clarity"—has posed almost insoluble issues of interpretation. However, few could quarrel with the main thesis of the study—the urgent necessity for strengthening procedures designed to facilitate settlements.

—JAMES CRAWFORD
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Growth and Stability of the Postwar Economy. By Bert G. Hickman. Washington, The Brookings Institution, 1960. xviii, 426 pp. $6.

As the Nation emerges from its fourth postwar contraction and simultaneously girds itself for what may be a major shift in defense-expenditure policy, there is a definite need for a book such as this, which offers a comprehensive description and appraisal of postwar business fluctuations in the light both of earlier cycles and of recent structural and autonomous changes.

While Hickman has, in general, "suppressed the temptation to peer into the future," and indeed calls attention to the difficulties of forecasting, he emerges with several conclusions which are valuable because they are well documented, although not particularly surprising. One, which may perhaps be a little disconcerting to some, is that the mildness of the first three postwar recessions was neither unusual nor entirely attributable to recent structural changes such as the growth in importance of automatic fiscal stabilizers. Also at work were a number of other strong factors, notably demand backlogs, liquidity, and investment opportu-

nities in important industries. These may not always be present in sufficient quantity, and deeper contractions are therefore possible, he holds, although prolonged depressions are unlikely because "our defenses . . . are stronger than ever before. . . . Indeed, were it not for the problems of imperfect foresight and possible conflict between antirecession and anti-inflation policies, fiscal actions could probably be instituted promptly enough to make even sharp, though brief, contractions a remote possibility."

In another conclusion, the author accepts the likelihood of a continuing gradual price rise, because presently accepted institutions are more effective in guarding against declines during a contraction than in preventing the price increases which are likely to occur at a time when our major goal is increased output and employment. In his analysis of creeping inflation, Hickman places more responsibility on our general attitudes than upon unionism, businessmen, or government mismanagement.

As regards our ability to achieve a full-employment growth rate in the 1960's, Hickman leaves unanswered the question of whether private investment opportunities will be adequate, although he does expect an uptrend in residential construction. Apparently he feels that either other investment demands (including public expenditures) must expand more rapidly than income or there must be a decline in the average propensity to save at full-employment levels, if full employment is to be maintained.

Probably more important than these conclusions are the methodical syntheses of the postwar cycles, which are discussed both chronologically and in terms of the key forces which influenced them, all set in their historical perspective and forming parts of long-term trends which have few real breaks in their patterns. Important autonomous forces and structural changes which are analyzed separately include war, population growth, technological change, the growing role of the Federal Government, shifts in composition of output and distribution of income, consumer demand, residential construction, and the factors affecting business investment. Specialists in these fields will find that much is lacking and may take issue with some of the emphases, but the chapters do give in compact form a rounded packet of information and theory.

Despite the title, the focus of the book is more upon cyclical behavior than secular growth. The author recognizes that economic stability requires an adequate amount of growth, but does not delve into such questions as why there has been an apparent slowdown in recent years nor where the new demand is likely to come from.

Hickman's methodology is largely based on income-expenditure theory, and the gross national product is his major frame of reference. While the study is not as statistical in its presentation nor—importantly—as mechanical and compartmentalized in its results as studies in this medium often are, it does suffer somewhat from an incomplete consideration of the intangible, nonmeasurable factors and the acceptance as "autonomous" of forces which need more study, such as a shift in savings rates. Thus, this reviewer would have preferred more emphasis on the consumer demand resulting from the great social leveling which has occurred since the past generation as the result of tax policies, social security, a large variety of fringe benefits and insurances, and the wide acceptance of the thesis that everyone is entitled to the protection and enhancement of his purchasing power. In addition, there have emerged wholly new strata of buyers—particularly Negroes and old people—as independent and substantial forces in the marketplace. On a more mundane sphere, the GNP approach leads one to consider residential housing separately from consumption and thereby to slide over the effect of new housing on the demand for consumer durable goods.

—Hyman L. Lewis

Chief, Office of Labor Economics
Bureau of Labor Statistics

Managing America's Economic Explosion. Edited by Dan H. Fenn, Jr. New York, McGraw-Hill Book Co., Inc., 1961. 269 pp. $6.

Changes needed to produce rapid, healthy economic growth—rather than maintenance of an existing business prosperity—dominated attention at Harvard University's 30th Annual National Business Conference, where these papers were originally presented.

Most of the papers describe solutions for specific management problems related to economic growth, such as executive development and organizational resistance to change. Several marketing adapta-

tions also were suggested; for example, sale of tin stoves in underdeveloped areas and use of Japanese components to improve the competitive position of domestically manufactured small radios.

The perennial general problems of stimulating productivity and preventing inflation were met by familiar proposals for tax reform to encourage saving and capital risking (Canham), a commitment by labor and management to hold wages and lower prices in accordance with productivity increases (Rostow), and large increases in consumer demand (Keyserling). The differences between the schools represented by these policies are not resolved, but Rostow does state convincingly two shortcomings in the Keyserling argument that economic problems can best be approached through consumption. First, there is less political realism in policies advancing the consumer's interest than in policies having specific advantages for both business and labor. Second, the argument from historical experience that growing markets automatically generate technological progress may not hold in the future. Rostow observes that future growth—unless supplemented by conscious efforts such as directing first-class talent into less glamorous fields—will not lie in manufacturing, where productivity gains have been easiest, but will center instead in services, trade, and transportation. Increases in demand in these sectors may result in simple, lateral expansion of facilities and techniques rather than needed technological revolutions.

As in other collections, tone and quality among these papers vary from careful, scholarly work to exhortation and partisanship. For example, Professor Vernon in "The Strategy and Tactics of Economic Coexistence" provides specific illustrations of Soviet mistakes in foreign trade (selling tires to Indonesia which fail in less than 5,000 miles), and he infers from the Soviet's belated participation in certain cartels (tin, aluminum, diamonds) that they are "slightly clumsy sellers learning the business" rather than infallible giants. On the other hand are papers with these statements: (1) "Without survival, there is no business." (2) ". . . there are many places where welfare is bad. And one of the worst places is in corporations." (3) ". . . we must have more zeal, more conviction, and more understanding." (4) ". . . the answer does not lie in some mythical 'plan,' but in letting the economy run itself, accommodating to the shifts and changes in a natural way."

On reading this book, one may well agree with Professor Rostow's concluding thought: ". . . we need some fresh thought about the future of American growth."

—JOSEPH A. BRACKETT

Division of Manpower and Employment Statistics
Bureau of Labor Statistics

Social and Economic Frontiers in Latin America. By Harry Stark. Dubuque, Iowa, Wm. C. Brown Co., 1961. 421 pp., bibliography. $7.25.

Dr. Stark, professor of Latin American affairs at the University of Miami, wrote his book for use as a college text. The author discusses in a highly informal and chatty manner every conceivable phase of Latin American affairs, including geography and topography, population, social and cultural traits, attitudes toward women, natural resources, economic and political organization, reasons for underdevelopment, attitudes toward the United States and toward communism, and U.S. aid to Latin America. He sets forth in his concluding chapter "The Americas in Tomorrow's World" the dangers of the future and the policies which he believes should be followed to obviate those dangers. He labels himself a "debunker" intent on separating "fact from legend" and on showing Latin America as it is, not as it has been said to be.

Dr. Stark is forthright in his criticism of the labor legislation and social security programs which have sprung up in most of the countries of Latin America. ". . . labor has not won, but has been handed . . . a welter of social legislation," he says, which in effect has been of no value to the worker but has added intolerable burdens to employers. The only way to improve the condition of the worker, the author holds, is to improve the economic condition of the various countries, and this can only be done by going back part if not all the way to the laissez faire of Adam Smith.

One case study is included in the book—Cuba. "By the middle of 1960," the author says, "it had become near impossible to separate procommunism from anti-Yankeeism in Cuba. To interpret the seemingly rapid entry of international communism in Cuba as an acceptance by the Cuban people of the Marxist ideology and Soviet procedure is not to know the liberty-loving and

easy-going inhabitants of that lovely island. . . ." He believes that Castro was sincere in saying at the beginning of his regime that neither he nor the regime was tinged with communism, but that the American people surrendered the battle for Cuba to communism before the Communists won that battle.

Dr. Stark has written an interesting book. It is marred, however, by his penchant for lecturing both the United States and Latin America and by his frequent suggestions that he is setting right the misconceptions of other writers and visitors to Latin America.

—MARJORIE C. EGLOFF
Office of Publications
Bureau of Labor Statistics

Italy: School for Awakening Countries—The Italian Labor Movement in Its Political, Social, and Economic Setting From 1800 to 1960. By Maurice F. Neufeld. Ithaca, N.Y., Cornell University, New York State School of Industrial and Labor Relations, 1961. 589 pp., bibliography. $9.

European Coal Mining Unions: Structure and Function. By Frederic Meyers. Los Angeles, University of California, Institute of Industrial Relations, 1961. 161 pp. (Monograph Series, 7.) $2.75.

Trade Union Democracy in Western Europe. By Walter Galenson. Berkeley and Los Angeles, University of California, Institute of Industrial Relations, 1961. 97 pp. $2.25, University of California Press.

The increase in America's international interests since the end of World War II has encouraged American scholars to push forward vigorously in comparative political, economic, and social studies. Research in the field of international labor has become an important part of this effort to understand the world about us. The volumes under review represent the three types of studies which have characterized American scholars' approach to studies of foreign labor movements: first, the study in depth of labor in a particular geographic area, usually a specific country; second, the study of a particular industry and its labor problems in various countries; third, the attempt to understand a particular manifestation of the labor movement as it appears in different countries.

One of the most ambitious, entertaining, and yet scholarly works in the first of these fields is the Neufeld study of Italy. This can be described as nothing less than an encyclopedic labor of love. Long study and personal experience in Italy have given Professor Neufeld an appreciation of the virtually insurmountable difficulties which the labor movement in Italy has had to face. It is indeed good to note that his sense of scholarship has not permitted his obvious affection for the country to cloud his clear view of the weaknesses of Italy's labor movement; it has, instead, guided well his exploration of the reasons behind the weaknesses. With obvious sadness, Professor Neufeld sums up his views: "Can Italy, or any nation limited in native resources and traditions of self-rule, but rich in social hatreds and unrest, meet the economic needs of its people fast enough to uphold and extend the institutions of democracy? Can strong and free labor unions arise and endure save under conditions of exceptional economic, social, and political good fortune? The Italian past would seem to indicate a prophetic answer: No."

The value of the Neufeld study lies as much in its summary of historical background as in the labor history. For each of five periods of Italian history, Neufeld supplies the reader with an extensive discussion of the political background and a review of social and economic conditions; then, having set the framework, the author describes how the labor movement fits into it. We thus have a much more satisfactory setting in which to reflect upon the history of the labor movement and against which we may judge the adequacy of the author's analysis. In this setting, the concluding discussion of the current Italian labor scene is comprehensible, although quite disturbing.

A series of appendixes supplies a wealth of data. One appendix contains an extensive series of tables on such subjects as population, food consumption, illiteracy, election data, the labor force, industrial production, trade, per capita income, wages, prices, and industrial disputes. Another is devoted to the administrative structure and systems of dues payments in the currently existing confederations of labor. (Such tabulations should be required in all such histories in view of the misunderstanding which exists in the minds of Americans as to the methods of operation of labor organizations in other parts of the world.) An excellent bibliography and index, as well as an

English–Italian guide to labor relations terminology, round out this monumental work.

The second type of international labor research is illustrated by Professor Meyers' monograph on the structure and function of European coal mining unions. Taking the miners' unions of France, Belgium, West Germany, and Great Britain as subjects, Meyers has examined critically the relationship between their structures and functioning. After reviewing the constitutions, government, collective bargaining, political performance, strike activity, safety, health, education, and service functions of these organizations, Meyers concludes with an analytical chapter explaining why the different structures have developed. The German and Belgian coal mining unions are both highly centralized. In Britain, the "residuaries of power are the area organizations." In France, on the other hand, the general anarchosyndicalist background of the labor movement has resulted in a highly decentralized movement.

Interestingly enough, Meyers finds that nationalization of the coal mines has not necessarily caused centralization of union authority. While in Great Britain, one of the forces contributing to the slow process of greater centralization is the existence of the Coal Board, nationalization of the French mines did not have this effect. In Belgium and Germany, on the other hand, private ownership has not prohibited the creation of central union authority. "This would seem to indicate that the crucial consideration is not the preexistence or nonexistence of a centralized managerial authority, but the emphasis on the bargaining process in the hierarchy of union objectives. Where, as in Germany, dealings with the employers are a major function, centralization is likely to occur, and to create sufficient pressures to result in employer centralization. But where other objectives rank higher and bargaining is relatively unimportant, this becomes irrelevant to the distribution of union authority."

The third type of international labor research is exemplified by Professor Galenson's study of trade union democracy in Western Europe, concerned chiefly with the place of rival unionism in the labor movement. Galenson studies European unions in order to address himself to a question raised by Professor Clark Kerr in the preface to this monograph: ". . . has the worker lost some freedom of choice in that he no longer has the option to move to another international or another federation? In the years since the merger of the AFL and the CIO, this issue has become more and more compelling."

Italy and France are selected in order to study the "weakness of rival unionism." With an abundance of choice among unions, the French and Italian workers can easily decide not to join any union. Galenson attributes this situation, in large measure, to employers who "have taken advantage of union rivalry, and of Communist control of the largest federations to avoid collective relationships with their employees." In Belgium, Holland, and Austria, on the other hand, rival unionism also exists, but the atmosphere is one of great trade union strength. (Austria is included in this group even though there is a single trade union federation in view of the formal ideological groupings which exist within the single Austrian federation.) In these countries, "Rival unionism works well because, in the first place, all the unions enjoy security and need not concern themselves with the problems arising out of employer hostility. Second, deep religious and political differences among the workers would make a unified labor movement difficult to achieve, so that a policy of 'live and let live' may be the only alternative to destruction of all labor organization. Finally, common wartime experiences among labor leaders of all persuasions served to dispel historical animosities which might otherwise have persisted and made cooperation difficult." It would seem logical to add to this conclusion another significant fact: The Communists are not strong in any of these countries, and there is thus no impulse on the part of the democratic unions to compete with the Communists in seeing which labor organization can make the most unreasonable economic or political demands.

Great Britain and Scandinavia are discussed briefly as examples of countries where there is great strength in unified trade unionism. With respect to Great Britain, Galenson points to the fact that, although there was never a challenge to the monopoly status of the British Trade Union Congress (similar to that the AFL faced on numerous occasions), "there has always been fairly

keen competition among British unions for members. This stems from the fact that the principles of exclusive jurisdiction and majority rule in representation are not followed in Britain." Galenson is of the opinion that neither the British nor the Scandinavian unions are run "in despotic fashion, in spite of the absence of worker choice." He does conclude, however, that "the price of monopoly seems to be a disquieting growth of membership apathy, and a noticeable loosening of the ties between workers and unions."

Certain practices with respect to internal democracy in European unions are commended by Professor Galenson to the attention of American unionists. These include the concept of the lay executive committee, the system of selecting permanent general secretaries, and "the right of the Swedish worker to bring to arbitration a dispute with his union—a different version of the United Automobile Workers' public review board . . . ."

Professor Galenson's closing comment is worthy of general attention: "In both Europe and the United States, there is still plenty of room within the labor movement for improvement in the degree of tolerance which unpopular and unorthodox views are accorded. Many within the labor movement—as well as outside—have yet to realize that it is the diversity of opinion rather than the uniformity which is the strength of democratic institutions."

—Morris Weisz
Assistant Commissioner
Bureau of Labor-Management Reports

Management's Talent Search: Recruiting Professional Personnel. By P. W. Maloney. New York, American Management Association, 1961. 160 pp. $4.50.

Mr. Maloney, who is engaged in the management of employee relations for the Esso Research and Engineering Co., has produced one of the best volumes written on the subject of professional-talent hunting in some time. He has given the problem the competent treatment that could be expected of one with a background of rich practical experience in an important industrial corporation.

The major asset of *Management's Talent Search* is the practical rather than theoretical approach to the difficult task of competing for well-qualified employees. The book can be read with interest and profit by the experienced personnel or industrial relations administrator, who will almost certainly find it helpful in improving his own recruitment problem, as well as by the small employer; certainly the trainee in personnel or industrial relations will find it most valuable in the pursuit of his goal.

The author particularly points out that efforts to attract well-qualified candidates for the positions available must be based on adequate planning. He lists various pitfalls which mark every recruiter's path and suggests ways of avoiding them. Experienced personnel technicians who regard—as most of them do—the promotion and sustaining of good will at the recruitment sources as a necessity are reminded that the methods they may have used in the past could cause trouble in the future. For example, broad promises of opportunities for the employee's future with the company which cannot be kept may bring undesirable consequences. While the immediate goal of filling a position is achieved, the final result is a dissatisfied employee who will give the firm unfavorable publicity. Inexperienced recruiters or those who lack a broad knowledge of positions and opportunities offered by the company will create a bad impression with the college placement officer, resulting in fewer or inferior referrals.

In discussing campus and noncampus recruiting, the author compares the present and future value of untrained employees with the results obtained through promotion from clerical to professional jobs by reassigning employees from affiliates to the parent organization, and through employment of trained personnel from other firms. Each of these recruitment methods has value but, except for the very small firm, they will not eliminate the necessity of positive recruitment activity on the campus and by advertising.

Generally, the book is very interesting, useful, and a most valuable addition to the already sizable literature in this field.

—Edward L. Diamond
Office of Management Standards
and Staff Utilization
Bureau of Labor Statistics

Optimum Use of Engineering Talent: Meeting the Need for Technical Personnel. New York, American Management Association, 1961. 416 pp. (Management Report Series, 58.) $9, Riverside Press, Cambridge, Mass.

The authors of this book—31 executives prominent in engineering management—analyze all aspects of engineering management and recommend techniques for increasing the effective use of engineering skills. Some of the articles are published for the first time; others are adapted from articles that have appeared in earlier American Management Association reports. Three articles are case histories of the engineering organizations of the International Business Machines Corp., the Carborundum Co., and Convair (a division of the General Dynamics Corp.).

The executives expressed concern as to whether future needs for engineers would be met. There was general agreement that among the chief problems of engineering management are those concerned with recruiting engineers, retaining them, and using their skills at optimum levels.

It was indicated that although adequate financial compensation is a prime inducement in the recruitment and retention of engineers, the workers are also strongly influenced by fringe benefits. The engineering manager should, therefore, attempt to provide the most desirable working conditions consistent with the scale of the company's operations and also conducive to the maximum productivity and professional development of engineers. A good working environment for engineers was described as that which provides up-to-date laboratory facilities and adequate supporting personnel to relieve engineers of routine tasks. Educational benefits, consisting of in-plant training programs or financial aid by the company to permit attendance at colleges and universities, were also indicated as desirable. It was noted, however, that the wage bill and other costs of the engineering division must be controlled to prevent excessive increases in the prices of the company's products.

The executives regard the role of the engineering manager in the corporate structure as vital in achieving the maximum utilization of engineers and in creating profitable products. For example, two articles are entirely devoted to the engineering manager, his role and development, while other articles also discuss this subject. The engineering manager is regarded as the link between decision-making and decision implementation. He must not only clearly define objectives, identify all technical functions, relate the functions to specific jobs, help determine the numbers and caliber of workers to be employed, assign jobs to engineers with suitable training and ability to do the work involved, and establish proper checks and controls; he must also make provision for engineers to have both lateral communication with experts in other disciplines, and vertical communications in their own whereby they can seek assistance for difficult tasks from their superiors or delegate simple tasks to less skilled workers.

The collection of articles in the book should be of interest to all persons who have responsibilities, no matter how small or large, for the supervision and management of engineering personnel.

—ANNIE LEFKOWITZ
Office of Manpower and Employment
Bureau of Labor Statistics

Education and Training

Proceedings of 17th Annual Conference of American Society of Training Directors, Philadelphia, Pa., May 2–4, 1961. (*In* Journal of the American Society of Training Directors, New York, July 1961, pp. 4–83. $1.)

In-Industry Training—[A Symposium]. (*In* Personnel Practice Bulletin, Department of Labor and National Service, Melbourne, Australia, June 1961, pp. 9–59. 5s.)

Trainees Abroad. Geneva, International Labor Office, 1961. 186 pp. (In English, French, and Spanish.) $2. Distributed in United States by Washington Branch of ILO.

Employee Benefits

Health and Insurance Plans Under Collective Bargaining: Life Insurance and Accidental Death and Dismemberment Benefits, Early Summer 1960. Washington, U.S. Department of Labor, Bureau of Labor Statistics, 1961. 23 pp. (Bull. 1296.) 25 cents, Superintendent of Documents, Washington.

Report of the United Mine Workers of America Welfare and Retirement Fund for the Year Ending June 30, 1961. Washington, 1961. 32 pp.

School Law Summaries: Leaves of Absence. Washington, National Education Association, Research Division, 1961. 22 pp. 50 cents.

Health and Safety

Injury Experience in the Oil and Gas Industry of the United States, 1960. By Nell B. Bradley, Nina L. Jones, Virginia E. Wrenn. Washington, U.S. Department of the Interior, Bureau of Mines, 1961. 13 pp. (Health and Safety Survey HSS 493.) Free.

Injury Experience in the Coking Industry, 1960. By Nell B. Bradley, Nina L. Jones, Virginia E. Wrenn. Washington, U.S. Department of the Interior, Bureau of Mines, 1961. 14 pp. (Health and Safety Survey, HSS 492.) Free.

Injury Experience and Related Employment Data for the Sand and Gravel Industry for 1958. By Naomi W. Kearney, Bertha W. Brown, Virginia E. Wrenn. Washington, U.S. Department of the Interior, Bureau of Mines, 1961. 25 pp. (Health and Safety Survey, HSS 491.) Free.

Disabling Work Injuries in Retail Lumber Yards, California, 1959. San Francisco, California Department of Industrial Relations, Division of Labor Statistics and Research, 1961. 21 pp.

Sickness Absence of Women Bus Conductors in London Transport (1953–1957). By C. J. Cornwall and P. A. B. Raffle. (*In* British Journal of Industrial Medicine, London, July 1961, pp. 197–212. 17s. 6d.)

Report on the Industrial Accidents Statistics of New Zealand for the Year 1959. Wellington, Department of Statistics, 1961. 52 pp.

Industrial Relations

The Dimensions of Major Work Stoppages, 1947–59. By Joseph W. Bloch and Julian Malnak. Washington, U.S. Department of Labor, Bureau of Labor Statistics, 1961. 41 pp. (Bull. 1298.) 30 cents, Superintendent of Documents, Washington.

Determination of Jurisdictional Disputes Under Section 10(k): Conflict With Other Provisions of the National Labor Relations Act. (*In* Columbia Law Review, New York, June 1961, pp. 1142–1158. $1.50.)

Some Aspects of the Union's Duty of Fair Representation. By Benjamin Aaron. Los Angeles, University of California, Institute of Industrial Relations, 1961. 25 pp. (Reprint 98; from a symposium on Internal Union Affairs, Ohio State Law Journal, Winter 1961.)

Trucking Industrial Relations and the Law: Some Practical Approaches. Proceedings of the Tenth Annual National Forum on Trucking Industrial Relations. Washington, American Trucking Associations, Inc., Industrial Relations Department, 1961. 225 pp. $9.75.

Union Security in Canada. By Michael Dudra. (*In* Labor Law Journal, Chicago, July 1961, pp. 585–594. $1.)

Strikes and Lockouts in Canada, 1959. Ottawa, Canadian Department of Labor, Economics and Research Branch, [1961]. 23 pp. 35 cents, Queen's Printer, Ottawa.

Labor Force

Structural Unemployment and Public Policy. By Sar A. Levitan. (*In* Labor Law Journal, Chicago, July 1961, pp. 573–582. $1.)

Employers' Forecasts of Manpower: An Interview Study. By Robert Ferber, Nai-Ruenn Chen, Fadil Zuwaylif. (*In* Journal of Business, University of Chicago, Graduate School of Business, Chicago, July 1961, pp. 387–395. $2.25.)

Employment in the Atomic Energy Field: A 1960 Occupational Survey. Prepared for the U.S. Atomic Energy Commission. Washington, U.S. Department of Labor, Bureau of Labor Statistics, 1961. 36 pp. (Bull. 1297.) 30 cents, Superintendent of Documents, Washington.

Lawyer: Opportunities for Careers in the Legal Profession. By Talbot Smith. New York, Macmillan Co., 1961. 201 pp. $3.50.

Age and Service of Railroad Employees in 1959. (*In* Monthly Review, U.S. Railroad Retirement Board, Chicago, July 1961, pp. 8–11.)

Work Experience in Puerto Rico: Calendar Year 1960. San Juan, Department of Labor, Bureau of Labor Statistics, 1961. 13 pp. (Special Report on the Labor Force 28.) In Spanish and English.

Full Employment and Underemployment in Puerto Rico, January 1959 to January 1961. San Juan, P.R., Department of Labor, Bureau of Labor Statistics, 1961. 15 pp. (Special Report on the Labor Force, 27.)

Hired Farm Workers in the United States—[A Chart Book]. By Albert Shostack and John R. Elliott. Washington, U.S. Department of Labor, Bureau of Employment Security, 1961. 46 pp. (BES R–200.)

Labor Laws in Action on New York State Fruit and Vegetable Farms, 1960. New York, State Department of Labor, Division of Research and Statistics, 1961. 32 pp. (Special Labor News Memorandum, 89.)

Labor in Canadian Agriculture. By George V. Haythorne. Cambridge, Mass., Harvard University, Graduate School of Public Administration, 1960. 122 pp.

Labor Organizations

National Union Strike Benefits—1961. By John J. McKew. (*In* Management Record, National Industrial Conference Board, Inc., New York, July–August 1961, pp. 29–37.)

Organized Labor and the Tariff. By Robert D. Leiter. (*In* Southern Economic Journal, Chapel Hill, N.C., July 1961, pp. 55–65. $1.50.)

Personnel Management

Retirement Preparation Programs: A Study of Company Responsibilities. By Michael T. Wermel and Geraldine M. Beideman. Pasadena, California Institute of Technology, Industrial Relations Section, 1961. 194 pp., bibliography. $10.

Leadership and Interpersonal Behavior. Edited by Luigi Petrullo and Bernard M. Bass. New York, Holt, Rinehart and Winston, Inc., 1961. xxxiv, 382 pp., bibliography.

Men, Money and Motivation: Executive Compensation As An Instrument of Leadership. By Arch Patton. New York, McGraw-Hill Book Co., Inc., 1961. 233 pp. $7.50.

The Challenging Years for Personnel Planning. By Frank H. Cassell. (*In* Personnel, American Management Association, New York, July–August 1961, pp. 46–54. $1.75; $1.25 to AMA members.)

Studies in Personnel and Industrial Psychology. By Edwin A. Fleishman. Homewood, Ill., The Dorsey Press, Inc., 1961. 633 pp. $9.35.

Orientation of New Employees. Washington, Bureau of National Affairs, Inc., 1961. 13 pp. (Personnel Policies Forum Survey 60.) $1.

Prices and Consumption Economics

Income of Families and Persons in the United States: 1959. Washington, U.S. Department of Commerce, Bureau of the Census, 1961. 52 pp. (Current Population Reports, Series P–60, No. 35.) 50 cents.

The Problem of Rising Prices. By William Fellner and others. Paris, Organization for European Economic Cooperation, 1961. 489 pp. $3.75.

Income Distribution and Economic Welfare in New York State. By John G. Myers. New York, State Department of Labor, Division of Research and Statistics, 1961. 168 pp. (Special Bull. 236.) $2.

Konsumentpriser och Indexberäkningar, Åren 1931–1959. Stockholm, Socialstyrelsen, 1961. 158 pp. (Table of contents and summary in English.)

Production and Productivity

The Economy of Israel: A Critical Account of the First Ten Years. By Alex Rubner. New York, Frederick A. Praeger, 1960. 307 pp., bibliography. $5.75.

Studies in Economic Development. Edited by Bernard Okun and Richard W. Richardson. New York, Holt, Rinehart and Winston, Inc., 1961. 498 pp., bibliography. $7.

Consumers of Abundance. By Gerard Piel. New York, Center for the Study of Democratic Institutions, 1961. 10 pp. Single copies free.

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Current Labor Statistics

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[1] This table is included in the January, April, July, and October issues of the Review.

NOTE: The following applies, with a few exceptions, to the statistical series published in the Current Labor Statistics section: (1) The source is the U.S. Department of Labor, Bureau of Labor Statistics, (2) a description of each series may be found in Techniques of Preparing Major BLS Statistical Series, BLS Bull. 1168 (1954), and (3) the scope of coverage is the United States without Alaska and Hawaii. Exceptions are noted on the tables.

A.—Employment

TABLE A–1. Estimated total labor force classified by employment status, hours worked, and sex

[In thousands]

Employment status	Estimated number of persons 14 years of age and over [1]														
	1961								1960					Annual average	
	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan. [2]	Dec.	Nov.	Oct.	Sept.	Aug.	1959	1958
Total, both sexes															
Total labor force	75,610	76,153	76,790	74,059	73,216	73,540	72,894	72,361	73,079	73,746	73,592	73,672	74,551	71,946	71,284
Civilian labor force	73,081	73,639	74,286	71,546	70,696	71,011	70,360	69,837	70,549	71,213	71,069	71,155	72,070	69,394	68,647
Unemployment		5,140	5,580	4,768	4,962	5,495	5,705	5,385	4,540	4,031	3,579	3,388	3,788	3,813	4,681
Unemployment rate, seasonally adjusted [3]	4,542	6.9	6.8	6.9	6.8	6.9	6.8	6.6	6.8	6.2	6.3	5.7	5.8	5.5	6.8
Unemployed 4 weeks or less	1,683	1,995	2,857	1,672	1,600	1,729	2,063	2,200	2,107	1,840	1,637	1,655	1,697	1,658	1,833
Unemployed 5–10 weeks	1,046	1,243	845	851	827	1,097	1,408	1,281	994	847	689	603	924	778	959
Unemployed 11–14 weeks	373	268	303	330	407	806	610	564	424	357	260	325	351	335	438
Unemployed 15–26 weeks	527	608	647	1,008	1,205	1,063	950	696	516	488	492	388	402	469	785
Unemployed over 26 weeks	913	1,026	928	907	923	799	674	643	499	499	500	417	414	571	667
Employment	68,539	68,499	68,706	66,778	65,734	65,516	64,655	64,452	66,009	67,182	67,490	67,767	68,282	65,581	63,966
Nonagricultural	62,215	62,046	62,025	61,234	60,734	60,539	59,947	59,818	61,059	61,516	61,244	61,179	61,828	59,748	58,122
Worked 35 hours or more	46,080	44,981	47,803	47,927	47,650	47,301	45,341	47,132	47,675	41,598	47,545	48,284	46,247	45,068	44,873
Worked 15–34 hours	6,644	6,837	7,081	7,533	7,536	7,522	8,952	7,414	8,044	14,484	8,371	7,247	6,308	8,531	7,324
Worked 1–14 hours	3,071	3,067	3,466	3,858	3,736	3,900	3,722	3,483	3,589	3,687	3,369	3,142	2,535	3,172	3,047
With a job but not at work [4]	6,421	7,162	5,688	1,916	1,811	1,816	1,933	1,789	1,752	1,746	1,957	2,508	6,737	2,974	2,876
Agricultural	6,325	6,453	6,671	5,544	5,000	4,977	4,708	4,634	4,950	5,666	6,247	6,588	6,454	5,836	5,844
Worked 35 hours or more	4,279	4,364	4,405	3,700	3,139	3,122	2,842	2,745	3,015	3,666	4,296	4,789	4,536	3,852	3,827
Worked 15–34 hours	1,345	1,385	1,577	1,341	1,200	1,195	1,121	1,126	1,163	1,341	1,447	1,314	1,363	1,356	1,361
Worked 1–14 hours	517	509	537	393	453	432	505	507	535	492	398	362	368	442	457
With a job but not at work [4]	183	195	150	111	209	228	240	256	237	167	106	123	187	186	199
Males															
Total labor force	51,281	51,540	51,614	49,753	49,299	49,309	49,109	49,031	49,186	49,506	49,455	49,570	50,678	49,081	48,802
Civilian labor force	48,784	49,058	49,142	47,272	46,812	46,812	46,608	46,539	46,688	47,005	46,964	47,085	48,229	46,562	46,197
Unemployment	2,816	3,092	3,303	3,033	3,270	3,709	3,887	3,717	3,092	2,496	2,200	2,082	2,400	2,473	3,155
Employment	45,968	45,966	45,839	44,238	43,542	43,103	42,721	42,822	43,596	44,509	44,764	45,003	45,829	44,089	43,042
Nonagricultural	40,904	40,874	40,598	39,696	39,244	38,845	38,627	38,796	39,337	39,881	39,909	39,900	40,603	39,340	38,240
Worked 35 hours or more	32,819	32,182	33,758	33,286	32,895	32,500	31,531	32,668	32,888	29,346	33,196	33,559	32,558	31,715	31,390
Worked 15–34 hours	3,280	3,344	3,388	3,603	3,629	3,609	4,356	3,534	3,806	7,993	4,098	3,440	3,203	4,405	3,736
Worked 1–14 hours	1,381	1,344	1,485	1,638	1,596	1,624	[illegible]	1,460	1,472	1,424	1,322	1,291	1,044	1,378	1,329
With a job but not at work [4]	3,425	4,004	1,967	1,160	1,123	[illegible]	[illegible]	3,105	1,173	1,120	1,292	1,611	2,799	1,840	1,784
Agricultural	5,064	5,092	5,241	4,553	4,298	[illegible]	[illegible]	3,927	4,259	4,629	4,855	5,103	5,226	4,749	4,802
Worked 35 hours or more	3,716	3,758	3,804	3,325	2,889	[illegible]	[illegible]	2,830	2,747	3,260	3,675	4,016	3,936	3,421	3,413
Worked 15–34 hours	843	813	921	843	831	841	832	813	830	843	786	725	857	823	857
Worked 1–14 hours	361	351	379	289	384	356	438	450	455	369	294	257	265	336	353
With a job but not at work [4]	144	170	138	96	194	213	217	233	217	156	99	106	167	170	179
Females															
Total labor force	24,329	24,612	25,176	24,306	23,916	24,232	23,785	23,330	23,893	24,240	24,138	24,102	23,872	22,865	22,482
Civilian labor force	24,297	24,580	25,144	24,274	23,884	24,199	23,752	23,298	23,861	24,208	24,106	24,070	23,841	22,832	22,451
Unemployment	1,726	2,048	2,277	1,734	1,692	1,786	1,818	1,669	1,448	1,536	1,379	1,307	1,388	1,340	1,526
Employment	22,571	22,533	22,867	22,540	22,192	22,413	21,934	21,630	22,413	22,672	22,726	22,764	22,453	21,492	20,924
Nonagricultural	21,311	21,172	21,437	21,549	21,490	21,695	21,321	21,023	21,722	21,636	21,333	21,279	21,224	20,405	19,882
Worked 35 hours or more	13,262	12,798	14,044	14,641	14,754	14,794	13,809	14,434	14,788	12,255	14,347	14,724	13,690	13,352	13,483
Worked 15–34 hours	3,364	3,493	3,693	3,930	3,907	3,913	4,596	3,880	4,238	6,490	4,272	3,807	3,105	4,126	3,589
Worked 1–14 hours	1,691	1,723	1,980	2,220	2,141	2,276	2,170	2,023	2,117	2,264	2,047	1,851	1,491	1,794	1,718
With a job but not at work [4]	2,995	3,158	1,721	756	688	709	744	684	579	626	665	897	2,939	1,134	1,093
Agricultural	1,261	1,361	1,430	991	701	718	612	607	692	1,037	1,392	1,485	1,229	1,087	1,042
Worked 35 hours or more	562	607	602	375	250	273	235	215	268	406	620	773	599	431	414
Worked 15–34 hours	502	572	656	499	389	354	289	314	324	497	661	590	506	533	504
Worked 1–14 hours	156	158	159	103	69	76	67	57	80	123	104	105	103	106	104
With a job but not at work [4]	39	26	13	14	15	15	24	22	20	11	7	16	20	17	20

[1] Estimates are based on information obtained from a sample of households and are subject to sampling variability. Data relate to the calendar week ending nearest the 15th day of the month. The employed total includes all wage and salary workers, self-employed persons, and unpaid workers in family-operated enterprises. Persons in institutions are not included.

Because of rounding, sums of individual items do not necessarily equal totals.

[2] Beginning in 1960, data include Alaska and Hawaii and are therefore not directly comparable with earlier data. The levels of the civilian labor force, the employed, and nonagricultural employment were each increased by more than 200,000. The estimates for agricultural employment and unemployment were affected so slightly that these series can be regarded as entirely comparable with pre-1960 data.

[3] Unemployment as a percent of labor force.

[4] Includes persons who had a job or business but who did not work during the survey week because of illness, bad weather, vacation, or labor dispute. Prior to January 1957, also included were persons on layoff with definite instructions to return to work within 30 days of layoff and persons who had new jobs to which they were scheduled to report within 30 days. Most of the persons in these groups have, since that time, been classified as unemployed.

NOTE: For a description of these series, see Explanatory Notes (in Employment and Earnings, U.S. Department of Labor, Bureau of Labor Statistics current issues).

TABLE A–2. Employees in nonagricultural establishments, by industry [1]

[In thousands]

Industry	1961								1960					Annual average	
	Aug.[2]	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1959	1958
Total employees	53,142	52,858	53,123	52,407	51,843	51,397	51,090	51,437	53,310	53,133	53,391	53,496	53,062	51,975	50,543
Mining	634	633	640	630	623	622	620	629	641	647	656	663	672	676	721
Metal	85.1	88.2	88.1	86.6	85.5	85.9	85.5	89.4	90.4	90.0	92.6	93.7	94.9	80.1	93.1
Iron	.....	28.6	28.3	27.8	27.1	27.5	27.0	28.7	29.7	29.4	32.4	32.9	34.1	27.2	30.8
Copper	.....	31.7	31.9	31.3	30.6	30.5	30.6	32.4	32.6	32.6	32.4	32.3	32.0	22.3	28.6
Lead and zinc	.....	10.0	10.0	9.9	10.2	10.3	10.4	10.6	10.4	10.1	9.8	10.4	10.7	12.3	12.9
Anthracite	.....	8.7	8.7	8.7	9.2	8.4	9.8	9.8	9.8	10.9	11.9	11.8	11.3	16.3	20.3
Bituminous coal	131.0	126.3	137.4	136.3	136.1	139.8	142.1	141.8	144.9	147.0	150.0	151.4	155.6	168.1	195.2
Crude-petroleum and natural-gas production	.....	295.2	291.7	286.8	284.7	284.3	282.3	284.0	286.2	284.7	284.8	288.9	291.6	300.8	302.6
Petroleum and natural-gas production (except contract services)	.....	171.8	170.3	168.4	168.5	169.0	169.5	170.5	171.5	171.9	172.4	176.2	177.8	180.6	188.0
Nonmetallic mining and quarrying	113.7	114.5	113.8	111.2	107.9	103.6	100.7	104.0	109.2	114.3	117.1	117.4	118.3	110.7	109.3
Contract construction	3,158	3,094	3,034	2,799	2,617	2,414	2,264	2,385	2,552	2,847	3,006	3,069	3,130	2,767	2,648
Nonbuilding construction	.....	645	646	580	508	432	396	418	465	566	620	638	661	584	569
Highway and street construction	.....	329.1	325.9	280.7	230.7	183.4	159.3	173.0	201.8	271.6	307.7	314.0	322.9	271.2	256.9
Other nonbuilding construction	.....	316.2	320.0	299.1	277.2	248.3	236.2	244.5	263.6	294.0	312.5	323.9	338.0	312.7	313.2
Building construction	.....	2,449	2,388	2,219	2,109	1,982	1,868	1,967	2,087	2,281	2,386	2,431	2,469	2,183	2,079
General contractors	.....	840.5	816.2	749.9	703.1	651.9	611.5	652.3	698.8	774.4	809.6	836.7	857.3	757.9	750.6
Special-trade contractors	.....	1,608.8	1,571.3	1,469.0	1,406.1	1,330.1	1,256.6	1,314.7	1,388.2	1,506.3	1,575.9	1,594.5	1,611.7	1,424.7	1,328.6
Plumbing and heating	.....	315.4	310.5	302.4	298.5	293.7	289.8	298.8	305.7	312.4	319.5	327.3	321.6	310.5	303.6
Painting and decorating	.....	279.2	256.8	230.1	214.7	189.5	166.9	175.6	196.1	221.6	234.6	245.1	255.9	201.4	169.6
Electrical work	.....	195.1	186.1	174.2	173.3	173.1	175.1	180.9	188.7	193.9	199.3	202.2	206.7	174.2	173.2
Other special-trade contractors	.....	819.1	817.9	762.3	719.6	673.8	624.8	659.4	697.7	778.4	822.5	819.9	827.5	738.6	682.2
Manufacturing	16,194	15,932	15,973	15,726	15,536	15,497	15,473	15,580	15,836	16,129	16,313	16,505	16,386	16,168	15,468
Durable goods	9,154	9,121	9,167	9,039	8,865	8,806	8,804	8,902	9,065	9,235	9,305	9,403	9,296	9,290	8,743
Nondurable goods	7,040	6,811	6,806	6,687	6,671	6,691	6,669	6,678	6,771	6,894	7,008	7,102	7,090	6,878	6,725
Durable goods															
Ordnance and accessories	157.2	156.0	154.4	153.4	152.4	153.3	153.2	152.9	152.7	151.5	148.9	150.2	149.8	141.7	126.7
Lumber and wood products (except furniture)	663.6	658.4	660.3	617.2	585.4	563.1	560.7	573.2	583.4	613.5	648.9	665.6	674.6	658.0	621.7
Logging camps and contractors	.....	134.7	132.8	103.7	86.6	78.8	79.9	88.1	89.2	102.5	119.3	122.1	118.5	98.7	86.2
Sawmills and planing mills	.....	296.2	298.8	290.5	280.7	271.9	270.5	274.0	279.3	292.7	304.4	313.3	321.8	319.9	311.0
Millwork, plywood, and prefabricated structural wood products	.....	132.5	132.5	128.0	124.2	119.4	117.5	118.8	121.8	123.0	127.8	131.1	133.2	139.1	127.1
Wooden containers	.....	40.0	41.1	40.8	39.7	39.0	38.9	38.7	39.4	40.6	41.7	42.4	43.6	44.0	44.7
Miscellaneous wood products	.....	55.0	55.1	54.2	54.2	54.0	53.9	53.6	53.7	54.7	55.7	56.7	57.5	56.3	52.7
Furniture and fixtures	382.5	372.8	372.5	367.8	368.4	366.4	366.4	365.5	373.3	384.5	391.9	393.0	392.1	384.0	357.9
Household furniture	.....	270.3	268.5	266.0	263.3	265.6	265.4	262.9	268.3	276.7	281.7	281.8	281.1	279.3	257.1
Office, public-building and professional furniture	.....	45.9	47.1	46.1	46.0	46.0	45.8	46.2	46.9	48.1	49.5	50.2	49.7	46.1	43.6
Partitions, shelving, lockers, and fixtures	.....	33.9	34.0	33.3	32.3	33.5	33.5	33.5	34.3	35.4	36.5	37.0	37.5	34.4	34.5
Screens, blinds, and miscellaneous furniture and fixtures	.....	22.7	22.9	22.4	21.8	21.3	21.7	22.9	23.8	24.3	24.2	24.3	23.8	24.2	22.5
Stone, clay, and glass products	549.9	538.1	534.3	525.7	515.9	507.1	500.4	505.4	522.4	536.9	547.9	555.3	558.0	550.4	514.5
Flat glass	.....	28.4	27.2	27.4	26.4	27.4	27.4	29.5	30.9	29.7	30.6	30.3	29.8	32.7	27.3
Glass and glassware, pressed or blown	.....	105.9	105.6	104.7	103.4	102.9	101.3	99.1	102.2	104.5	106.0	108.5	107.2	100.2	95.5
Glass products made of purchased glass	.....	16.2	16.0	15.9	15.7	16.0	16.4	16.3	17.4	17.5	17.4	17.2	17.0	18.0	16.3
Cement, hydraulic	.....	40.4	40.3	39.0	38.2	35.8	34.7	36.2	37.6	39.1	40.7	41.9	42.9	41.7	42.0
Structural clay products	.....	70.8	70.0	68.4	67.0	64.4	62.0	63.4	67.0	70.3	72.1	73.8	74.6	75.5	73.1
Pottery and related products	.....	42.0	43.3	43.3	43.3	43.1	43.4	43.4	43.8	45.8	47.0	47.4	47.6	48.1	43.9
Concrete, gypsum, and plaster products	.....	117.9	116.5	113.4	110.6	108.0	106.1	107.0	110.6	114.7	117.5	118.2	120.5	117.8	108.8
Cut-stone and stone products	.....	.....	.....	18.0	17.7	17.2	17.0	16.9	17.7	18.1	18.5	18.7	18.6	18.1	18.3
Miscellaneous nonmetallic mineral products	.....	17.9	17.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	.....	98.6	97.5	95.6	93.6	92.3	92.1	93.6	95.2	97.2	98.1	99.3	98.8	98.3	89.3
Primary metal industries	1,140.8	1,120.3	1,118.7	1,096.8	1,063.8	1,051.8	1,049.3	1,059.3	1,074.2	1,095.1	1,118.1	1,133.3	1,142.1	1,137.7	1,104.4
Blast furnaces, steel works, and rolling mills	.....	538.1	532.2	519.7	499.9	488.6	482.3	479.7	484.7	499.0	515.3	524.6	540.3	522.0	536.7
Iron and steel foundries	.....	208.3	208.8	205.4	200.3	200.4	201.6	206.8	211.2	213.9	216.6	219.2	213.4	223.9	197.4
Primary smelting and refining of nonferrous metals	.....	54.2	54.6	53.3	52.8	53.3	54.1	55.5	56.1	56.2	56.6	57.4	58.7	52.2	56.2
Secondary smelting and refining of nonferrous metals	.....	11.9	11.8	11.4	11.3	11.3	11.2	11.6	11.8	11.8	12.0	12.3	12.2	12.2	11.5
Rolling, drawing, and alloying of nonferrous metals	.....	110.6	112.2	110.9	109.0	107.9	108.0	108.7	110.4	110.6	112.0	112.4	112.3	115.8	105.5
Nonferrous foundries	.....	55.9	57.5	56.3	54.9	55.0	55.9	57.3	58.7	59.2	60.7	60.8	60.4	64.8	57.7
Miscellaneous primary metal industries	.....	141.3	141.6	139.8	135.6	135.3	136.2	139.7	141.3	144.4	144.9	146.6	144.8	146.8	139.4

See footnotes at end of table.

TABLE A–2. Employees in nonagricultural establishments, by industry [1]—Continued

[In thousands]

Industry	1961								1960					Annual average	
	Aug.[2]	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1959	1958
Manufacturing—Continued															
Durable goods—Continued															
Fabricated metal products (except ordnance, machinery, and transportation equipment)	1,049.6	1,029.4	1,042.9	1,027.4	1,000.4	987.8	993.8	1,012.6	1,036.7	1,061.3	1,078.9	1,081.0	1,064.9	1,069.0	1,029.9
Tin cans and other tinware	-------	61.6	60.0	59.3	58.2	56.8	55.5	54.8	55.5	55.9	57.8	61.3	63.9	59.6	58.2
Cutlery, handtools, and hardware	-------	124.1	128.5	127.2	120.7	123.4	125.1	128.1	130.8	132.5	132.6	131.2	128.7	134.2	128.3
Heating apparatus (except electric) and plumbers' supplies	-------	109.2	110.4	109.3	106.6	105.3	104.4	106.7	107.6	109.5	112.9	113.6	113.8	116.6	109.3
Fabricated structural metal products	-------	287.6	285.3	277.8	274.7	270.6	271.4	274.8	283.7	289.6	294.6	295.8	298.1	285.3	303.0
Metal stamping, coating, and engraving	-------	214.3	224.7	223.7	214.1	207.2	210.7	220.1	228.2	237.2	240.9	238.2	223.2	230.1	210.7
Lighting fixtures	-------	46.7	47.5	45.7	45.5	45.5	46.2	46.6	48.4	49.4	49.9	49.7	47.6	49.2	44.7
Fabricated wire products	-------	52.2	53.1	52.7	51.0	49.8	50.7	51.2	52.3	53.6	55.0	55.6	54.8	56.5	52.4
Miscellaneous fabricated metal products	-------	133.7	133.4	131.7	129.6	129.2	129.8	130.3	130.2	133.6	135.2	135.6	134.8	137.5	123.3
Machinery (except electrical)	1,575.2	1,571.3	1,580.3	1,579.4	1,578.4	1,573.9	1,575.8	1,572.7	1,579.0	1,583.2	1,585.4	1,605.1	1,615.2	1,611.7	1,501.2
Engines and turbines	-------	94.2	95.4	97.5	97.5	96.3	96.3	97.0	98.0	97.8	96.0	99.3	99.8	103.1	93.1
Agricultural machinery and tractors	-------	141.9	146.6	152.9	156.0	153.9	151.3	146.3	143.2	138.7	139.1	139.6	144.0	157.9	136.9
Construction and mining machinery	-------	115.4	115.2	114.2	113.4	112.3	112.6	111.7	111.8	112.9	116.6	119.2	121.6	129.9	122.0
Metalworking machinery	-------	240.6	243.0	239.6	244.4	245.0	245.7	245.4	246.2	246.6	247.9	249.7	250.8	238.7	223.7
Special-industry machinery (except metalworking machinery)	-------	172.3	174.2	173.0	171.4	172.1	173.3	173.3	174.8	175.5	176.0	176.3	176.4	168.5	159.6
General industrial machinery	-------	215.5	215.6	213.6	211.7	212.1	213.0	215.2	218.1	221.0	222.9	226.7	228.0	223.5	220.1
Office and store machines and devices	-------	144.6	144.1	142.8	143.1	142.2	142.7	142.7	142.6	142.7	142.3	142.0	140.8	132.7	124.9
Service-industry and household machines	-------	181.6	182.3	185.5	184.1	184.0	183.3	180.5	179.5	180.4	173.5	180.0	179.7	184.9	168.9
Miscellaneous machinery parts	-------	265.2	263.9	260.3	256.8	256.0	257.6	260.6	265.1	267.6	271.1	272.3	274.1	275.5	252.0
Electrical machinery	1,327.5	1,301.4	1,308.2	1,296.6	1,285.2	1,288.6	1,292.0	1,297.9	1,300.4	1,320.8	1,284.9	1,326.7	1,308.0	1,241.6	1,118.8
Electrical generating, transmission, distribution, and industrial apparatus	-------	411.2	411.3	407.6	404.9	404.6	405.3	407.6	409.1	409.2	387.3	416.9	415.8	402.1	373.5
Electrical appliances	-------	37.2	38.3	37.6	37.5	37.3	36.2	35.7	37.3	41.4	40.1	40.2	38.4	37.7	34.6
Insulated wire and cable	-------	28.2	28.3	26.4	28.0	28.4	28.2	28.4	28.9	29.2	29.0	28.3	27.8	28.1	26.4
Electrical equipment for vehicles	-------	65.1	67.1	66.6	63.7	65.3	67.0	69.8	72.4	72.9	72.9	72.5	67.9	69.8	61.8
Electric lamps	-------	25.6	25.4	25.8	25.0	26.2	26.7	27.2	27.7	28.0	23.6	28.1	28.7	27.6	26.4
Communication equipment	-------	686.3	690.1	685.4	678.2	679.5	681.7	681.9	676.9	690.6	684.1	690.9	680.2	627.2	551.4
Miscellaneous electrical products	-------	47.8	47.7	47.2	46.9	47.3	46.9	47.3	48.1	49.2	47.9	49.8	49.2	49.1	45.7
Transportation equipment	1,438.4	1,538.4	1,549.2	1,543.3	1,496.6	1,499.4	1,498.1	1,555.1	1,611.5	1,631.0	1,629.8	1,620.0	1,524.8	1,670.8	1,592.8
Motor vehicles and equipment	-------	704.9	717.2	708.4	657.8	655.3	657.9	711.7	765.9	781.0	783.5	767.2	680.3	731.6	630.8
Aircraft and parts	-------	639.2	637.4	639.9	643.5	647.5	644.7	643.3	643.9	644.1	634.7	640.0	638.8	734.9	757.6
Aircraft	-------	363.4	361.4	362.1	363.9	367.4	365.4	366.3	368.2	370.1	370.2	371.1	371.4	435.0	457.2
Aircraft engines and parts	-------	140.4	140.4	141.2	141.5	141.3	140.0	138.0	137.2	135.5	127.5	133.2	132.1	146.3	152.6
Aircraft propellers and parts	-------	12.0	12.1	12.4	12.7	12.7	12.5	12.1	11.9	11.8	11.8	12.0	12.7	14.4	18.3
Other aircraft parts and equipment	-------	123.4	123.5	124.2	125.4	126.1	126.8	126.9	126.6	126.7	125.2	123.7	122.6	139.2	129.5
Ship and boat building and repairing	-------	138.7	139.2	141.3	141.6	142.4	140.3	141.9	141.2	142.1	143.4	143.4	143.0	142.8	144.5
Shipbuilding and repairing	-------	121.8	120.2	120.7	120.5	122.0	120.3	122.2	122.8	122.0	124.3	124.3	124.3	126.9	128.3
Boatbuilding and repairing	-------	16.9	19.0	20.6	21.1	20.4	20.0	19.7	18.4	20.1	19.1	19.1	18.7	21.9	19.2
Railroad equipment	-------	45.7	45.5	44.2	44.4	45.2	46.5	50.3	52.0	54.6	57.7	58.6	51.9	51.4	50.9
Other transportation equipment	-------	9.9	9.9	9.5	9.3	9.0	8.7	7.9	8.5	9.2	10.5	10.8	10.8	10.1	9.0
Instruments and related products	345.2	339.4	341.1	337.8	335.2	335.9	336.8	340.5	344.0	347.3	348.1	350.8	351.9	338.9	315.2
Laboratory, scientific, and engineering instruments	-------	62.2	63.6	63.8	64.3	65.1	65.3	65.6	65.9	65.8	65.8	65.6	65.6	64.2	58.1
Mechanical measuring and controlling instruments	-------	98.8	98.8	98.6	97.4	96.7	97.1	97.4	97.6	97.3	97.9	98.7	99.3	93.0	83.9
Optical instruments and lenses	-------	18.0	18.1	17.8	17.7	17.9	17.8	18.1	18.3	18.6	18.7	18.4	18.5	15.8	14.0
Surgical, medical, and dental instruments	-------	44.6	44.8	44.6	44.5	44.6	44.8	44.8	44.8	45.0	45.0	45.1	45.4	43.1	41.5
Ophthalmic goods	-------	25.1	25.3	24.9	24.4	24.3	24.5	24.7	25.4	26.2	26.1	26.7	27.1	26.1	23.7
Photographic apparatus	-------	64.7	64.3	63.2	63.2	63.3	63.9	64.9	65.7	67.2	67.5	67.5	67.6	65.2	65.6
Watches and clocks	-------	26.0	26.2	26.0	23.7	24.0	23.4	25.0	26.3	27.2	27.4	28.8	28.4	31.4	28.4
Miscellaneous manufacturing industries	524.1	495.6	505.5	493.9	482.9	478.6	477.1	467.3	486.9	500.8	522.2	522.3	514.9	486.5	459.9
Jewelry, silverware, and plated ware	-------	42.2	43.6	43.5	43.9	43.9	44.9	44.7	45.6	46.6	47.5	46.9	46.7	45.9	44.4
Musical instruments and parts	-------	17.4	17.5	17.6	17.6	17.7	17.7	17.8	18.7	19.1	19.1	19.2	19.2	18.0	16.4
Toys and sporting goods	-------	99.2	101.4	97.3	91.1	86.1	82.3	75.2	83.0	97.1	104.5	104.7	101.0	84.5	81.7
Pens, pencils, other office supplies	-------	32.8	32.5	31.8	31.4	31.5	31.7	31.7	32.1	32.5	33.2	32.8	32.8	30.8	30.7
Costume jewelry, buttons, notions	-------	53.5	55.2	53.2	52.6	54.1	54.9	54.2	56.6	58.5	60.6	60.6	61.1	60.6	58.2
Fabricated plastics products	-------	96.1	97.0	95.0	92.8	91.4	91.9	91.3	93.0	95.6	95.4	96.2	95.3	92.6	84.0
Other manufacturing industries	-------	154.4	158.3	155.5	153.5	153.9	153.7	152.4	157.9	160.4	161.9	161.9	158.8	154.1	144.5
Nondurable goods															
Food and kindred products	1,621.7	1,514.7	1,462.7	1,402.1	1,390.0	1,381.8	1,371.7	1,390.3	1,434.5	1,486.5	1,567.0	1,628.9	1,601.7	1,470.2	1,476.4
Meat products	-------	303.8	304.2	297.1	292.2	291.6	292.1	299.0	303.6	309.6	310.7	310.9	308.2	302.1	307.0
Dairy products	-------	101.3	99.5	95.0	93.0	91.0	88.6	88.8	90.8	91.4	94.0	97.4	101.4	96.8	99.8
Canning and preserving	-------	260.2	217.2	190.9	190.8	182.9	175.8	177.2	192.3	224.6	291.1	362.5	333.8	223.0	220.4
Grain-mill products	-------	112.1	110.7	108.8	107.7	107.7	107.4	108.5	107.8	107.8	110.5	110.4	112.1	113.3	113.8
Bakery products	-------	289.4	289.2	284.6	282.8	284.1	283.5	284.4	288.8	289.8	292.0	290.8	289.9	285.2	284.3
Sugar	-------	25.7	24.8	24.7	26.1	24.4	25.1	31.5	37.9	42.8	39.4	27.6	25.7	31.0	31.4
Confectionery and related products	-------	65.6	69.3	65.7	65.7	70.4	72.0	72.0	77.1	78.6	79.3	77.0	73.2	73.5	73.4
Beverages	-------	218.8	210.1	204.1	202.3	200.4	197.7	198.7	205.6	209.5	214.9	216.3	219.1	209.1	207.0
Miscellaneous food products	-------	137.8	137.7	131.5	129.4	129.3	129.8	130.2	130.6	132.4	135.1	136.0	138.3	136.2	137.3

See footnotes at end of table.

TABLE A–2. Employees in nonagricultural establishments, by industry [1]—Continued

[In thousands]

Industry	1961								1960					Annual average	
	Aug. [2]	July [2]	June	May	April	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1959	1958
Manufacturing—Continued															
Nondurable goods—Continued															
Tobacco manufactures	88.1	71.8	74.1	73.4	74.4	78.0	82.3	85.5	88.5	92.4	104.5	107.5	91.4	89.2	90.4
Cigarettes	------	37.8	38.1	37.3	37.1	37.3	37.5	37.6	37.6	37.9	37.8	38.2	38.5	37.4	36.4
Cigars	------	20.4	22.6	22.7	22.6	23.2	23.9	23.8	25.1	25.6	25.7	25.5	25.3	27.1	29.1
Tobacco and snuff	------	5.8	5.9	5.9	5.9	5.9	6.0	5.9	6.0	6.1	5.9	6.0	6.2	6.6	6.5
Tobacco stemming and redrying	------	7.8	7.5	7.5	8.8	11.6	14.9	18.2	19.8	22.8	35.1	37.8	21.4	18.1	18.4
Textile-mill products	931.7	916.2	927.1	916.0	907.7	900.6	899.4	899.5	911.9	925.6	933.2	943.3	953.6	906.0	941.5
Scouring and combing plants	------	5.3	5.4	5.1	5.0	4.8	4.6	4.8	4.8	4.9	5.1	5.2	5.4	5.5	5.2
Yarn and thread mills	------	100.1	100.9	99.5	98.5	97.8	97.4	97.1	98.9	99.7	100.8	102.4	104.2	110.0	108.2
Broad-woven fabric mills	------	369.6	373.2	370.2	369.5	369.5	371.5	373.0	375.6	377.4	379.7	384.5	388.6	398.5	399.9
Narrow fabrics and small wares	------	27.8	28.1	28.1	27.9	27.5	27.7	27.6	27.9	28.1	28.3	29.0	29.4	29.5	27.5
Knitting mills	------	221.2	224.9	220.5	216.7	211.8	207.3	204.2	209.3	218.6	222.0	224.1	227.3	220.1	207.0
Dyeing and finishing textiles	------	87.9	88.2	86.9	86.9	86.0	85.7	85.9	87.0	87.5	87.8	87.8	89.0	88.4	84.9
Carpets, rugs, other floor coverings	------	40.6	41.4	41.7	41.2	42.2	42.5	42.8	43.3	43.5	43.5	44.0	43.9	46.6	44.8
Hats (except cloth and millinery)	------	9.6	9.8	9.2	8.2	8.7	9.2	9.2	9.3	9.0	8.9	9.3	9.7	10.1	10.1
Miscellaneous textile goods	------	54.1	55.2	54.8	53.8	52.3	53.5	54.9	55.8	56.9	57.1	57.0	56.1	57.3	53.9
Apparel and other finished textile products	1,214.7	1,153.3	1,176.6	1,161.2	1,168.7	1,200.9	1,191.5	1,165.2	1,178.6	1,209.5	1,209.0	1,225.1	1,237.7	1,210.7	1,186.3
Men's and boys' suits and coats	------	105.8	111.3	107.1	105.8	110.9	112.4	112.7	112.8	114.1	115.1	115.8	116.6	111.4	107.3
Men's and boys' furnishings and work clothing	------	343.1	348.2	342.7	340.5	340.3	339.3	332.4	338.2	343.6	349.1	356.8	359.3	338.3	311.3
Women's outerwear	------	311.6	317.1	318.7	331.0	347.0	337.9	327.1	328.0	337.4	326.2	334.0	343.4	344.7	339.7
Women's, children's undergarments	------	108.8	112.8	112.8	113.3	113.7	113.5	111.5	115.1	118.7	119.2	118.8	118.8	118.9	114.1
Millinery	------	17.8	14.4	12.2	15.6	23.4	23.4	19.3	16.8	16.3	18.7	18.9	19.5	18.5	17.9
Children's outerwear	------	72.8	73.0	70.5	66.7	70.8	72.9	71.1	68.9	71.0	71.5	71.9	73.9	74.4	73.6
Fur goods	------	7.3	7.4	6.9	5.8	5.9	6.0	6.4	7.3	8.3	8.3	8.0	7.5	9.2	10.7
Miscellaneous apparel and accessories	------	55.3	58.0	57.0	57.2	58.1	57.4	54.5	57.4	61.2	61.2	61.5	61.4	60.3	56.7
Other fabricated textile products	------	130.8	134.4	133.3	132.8	130.8	128.7	130.2	134.1	138.9	139.7	139.4	137.3	135.0	125.0
Paper and allied products	557.4	550.8	556.7	548.0	545.8	545.5	544.1	548.0	551.9	559.9	563.9	567.7	567.0	559.9	547.1
Pulp, paper, and paperboard mills	------	270.6	274.3	268.9	268.1	268.4	267.9	269.7	271.7	273.9	275.7	278.3	279.2	273.8	269.4
Paperboard containers and boxes	------	146.5	148.5	146.0	144.8	145.1	145.3	147.0	149.2	153.5	154.7	154.7	153.0	153.5	149.6
Other paper and allied products	------	133.7	133.9	133.1	132.9	132.0	130.9	131.3	131.0	132.5	133.5	134.7	134.8	132.6	128.1
Printing, publishing, and allied industries	899.4	897.2	897.0	891.6	893.8	896.7	893.7	895.0	904.2	910.2	908.2	900.9	895.1	868.3	852.2
Newspapers	------	331.7	331.9	330.4	330.0	329.7	328.1	329.2	333.3	333.8	332.5	331.2	331.0	322.6	316.4
Periodicals	------	64.0	64.1	64.1	64.8	64.9	65.7	66.3	65.5	65.7	65.3	64.5	62.8	62.4	61.5
Books	------	64.9	65.4	65.1	64.9	64.6	64.1	64.1	64.5	64.5	64.4	64.4	63.8	58.0	55.0
Commercial printing	------	228.7	229.1	227.8	228.5	230.6	229.7	230.6	232.4	233.6	233.5	233.0	230.8	224.0	220.7
Lithographing	------	69.3	68.6	68.3	69.0	69.1	68.5	67.8	69.5	70.1	69.7	69.3	68.7	66.3	65.7
Greeting cards	------	23.2	22.9	21.0	20.6	20.7	20.9	20.7	22.0	23.7	24.2	23.0	22.6	20.8	20.0
Bookbinding and related industries	------	48.1	47.6	46.8	47.3	48.0	47.6	47.5	47.3	48.0	48.2	48.3	48.6	46.2	44.5
Miscellaneous publishing and printing services	------	67.3	67.4	68.1	68.7	69.1	69.1	68.8	69.7	70.8	70.4	67.2	66.8	68.0	68.4
Chemicals and allied products	887.3	885.1	882.2	881.1	881.4	872.9	866.5	870.0	873.0	875.0	878.9	879.8	882.2	847.8	820.9
Industrial inorganic chemicals	------	105.5	104.6	103.5	103.9	103.7	103.6	104.5	105.0	105.1	105.2	105.8	106.7	102.5	102.2
Industrial organic chemicals	------	349.5	345.7	342.2	340.4	338.7	337.8	338.5	340.5	340.9	340.9	343.2	347.3	325.6	310.6
Drugs and medicines	------	104.9	104.6	103.2	103.0	102.9	102.9	104.8	105.3	105.5	105.6	106.5	107.7	104.0	102.9
Soap, cleaning and polishing preparations	------	55.9	55.6	54.9	55.0	54.2	53.8	54.0	54.2	54.1	54.3	54.4	54.3	51.0	49.3
Paints, pigments, and fillers	------	78.4	77.4	76.6	75.2	74.4	74.5	75.0	75.5	76.3	77.1	77.8	79.1	75.5	73.9
Gum and wood chemicals	------	7.4	7.6	7.5	7.7	7.6	7.6	7.7	7.7	7.7	7.7	7.8	7.8	7.7	7.8
Fertilizers	------	32.9	35.6	44.2	47.1	43.8	37.8	36.7	35.0	33.7	34.7	33.9	31.7	36.9	35.6
Vegetable and animal oils and fats	------	34.8	35.7	36.4	37.3	37.1	38.9	39.7	40.9	41.9	42.0	39.1	36.6	40.0	38.5
Miscellaneous chemicals	------	115.8	115.4	112.6	111.8	110.5	109.6	109.1	108.9	109.8	111.4	111.3	111.0	104.6	101.0
Products of petroleum and coal	219.5	218.3	220.7	218.2	217.6	216.2	215.6	217.2	218.2	221.6	224.8	226.2	229.8	233.4	238.2
Petroleum refining	------	173.4	176.0	174.6	175.2	175.0	175.1	175.6	176.7	177.5	178.7	180.3	182.4	186.2	192.1
Coke, other petroleum and coal products	------	44.9	44.7	43.6	42.4	41.2	40.5	41.6	41.5	44.1	46.1	45.9	47.4	47.2	46.1
Rubber products	249.6	245.9	247.3	243.6	239.5	238.7	240.3	246.7	250.5	251.6	258.1	258.4	257.1	259.8	244.6
Tires and inner tubes	------	95.5	95.1	94.0	93.6	94.3	93.1	96.6	98.1	99.8	100.4	101.6	103.0	101.6	100.8
Rubber footwear	------	23.6	23.8	23.5	23.0	22.7	22.5	21.9	22.1	21.1	22.6	22.4	22.1	22.0	20.9
Other rubber products	------	126.8	128.4	126.1	122.9	121.7	124.7	128.2	130.3	130.7	135.1	134.4	132.0	136.2	122.9
Leather and leather products	370.8	357.9	362.0	352.2	352.1	359.7	363.5	360.1	359.3	362.0	360.8	364.2	373.9	372.2	357.2
Leather: tanned, curried, and finished	------	32.3	33.2	33.0	32.5	32.3	32.5	33.6	34.1	34.1	34.2	34.4	34.6	37.1	37.9
Industrial leather belting and packing	------	5.0	4.7	4.5	4.6	4.7	4.7	4.8	4.6	4.7	4.6	4.7	4.6	4.9	4.1
Boot and shoe cut stock and findings	------	20.1	20.7	19.9	19.7	20.1	20.3	20.7	19.7	19.1	18.3	18.2	19.3	19.4	18.2
Footwear (except rubber)	------	241.6	243.9	237.4	236.2	242.4	245.8	244.2	242.3	240.2	238.1	242.0	249.5	248.9	238.1
Luggage	------	15.1	15.2	14.8	14.8	13.9	13.6	13.6	13.8	15.7	16.5	16.4	17.3	15.3	15.0
Handbags and small leather goods	------	29.1	28.9	27.7	30.3	32.5	33.4	31.5	31.9	33.5	33.9	32.7	32.4	31.2	29.9
Gloves and miscellaneous leather goods	------	14.7	15.4	14.9	14.3	13.8	13.2	11.7	12.9	14.7	15.2	15.8	16.2	15.4	14.0

See footnotes at end of table

TABLE A–2. Employees in nonagricultural establishments, by industry [1]—Continued

[In thousands]

Industry	1961								1960					Annual average	
	Aug. [2]	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1959	1958
Transportation and public utilities	3,838	3,840	3,818	3,773	3,756	3,749	3,759	3,763	3,843	3,868	3,889	3,907	3,921	3,902	3,903
Transportation	2,490	2,492	2,481	2,445	2,430	2,420	2,430	2,432	2,507	2,528	2,546	2,553	2,560	2,559	2,531
Interstate railroads	.....	837.5	831.7	819.8	814.4	812.9	816.6	817.7	849.2	852.2	869.3	876.0	904.6	930.6	963.6
Class I railroads	.....	731.0	725.0	713.4	708.0	705.9	708.8	711.0	734.6	743.5	759.9	766.2	792.9	815.3	840.8
Local railways and bus lines	.....	87.4	88.4	88.5	88.5	88.5	88.6	88.7	88.8	89.3	88.2	90.8	90.4	92.3	96.4
Trucking and warehousing	.....	875.0	877.1	857.3	850.4	848.4	850.7	854.1	880.9	898.2	902.2	891.7	877.4	853.2	792.5
Other transportation and services	.....	691.9	684.1	679.3	676.3	670.0	673.6	671.2	687.6	688.3	686.1	694.5	687.4	683.3	678.5
Buslines, except local	.....	42.7	42.2	41.0	40.2	39.4	39.2	40.4	39.7	39.9	40.0	41.1	41.7	40.4	41.7
Air transportation (common carrier)	.....	154.8	151.9	150.5	149.9	148.0	149.3	149.3	150.6	150.9	151.3	152.7	153.3	145.9	140.3
Pipe-line transportation (except natural gas)	.....	24.3	24.2	23.6	23.5	23.5	23.5	23.6	23.6	23.7	23.8	24.1	24.5	25.1	25.8
Communication	733	735	731	728	730	731	732	733	736	739	741	745	751	743	771
Telephone	.....	698.8	695.2	691.7	693.7	694.8	695.1	696.3	699.3	701.8	703.8	707.8	713.5	705.5	732.4
Telegraph	.....	35.6	35.6	35.4	35.3	35.4	35.8	36.0	36.5	36.6	36.5	36.4	36.3	37.2	38.3
Other public utilities	615	613	606	600	596	598	597	598	600	601	602	609	610	600	601
Gas and electric utilities	.....	588.4	581.6	576.4	572.2	574.3	573.4	574.4	576.9	577.6	578.7	584.7	585.2	576.6	578.5
Electric light and power utilities	.....	256.5	254.7	251.9	252.0	252.1	252.1	252.5	253.3	253.6	254.2	257.2	259.3	255.9	258.3
Gas utilities	.....	160.4	157.0	156.0	151.9	154.6	154.5	155.0	155.3	155.5	155.5	156.9	153.6	153.3	151.5
Electric light and gas utilities combined	.....	171.5	168.9	168.5	168.3	167.6	166.8	166.9	168.3	168.5	169.0	170.6	172.3	167.4	168.7
Local utilities, not elsewhere classified	.....	24.5	24.2	23.6	23.9	23.7	23.3	23.3	23.4	23.5	23.6	24.0	24.5	23.2	22.9
Wholesale and retail trade	11,538	11,543	11,575	11,446	11,389	11,337	11,279	11,464	12,405	11,842	11,742	11,665	11,592	11,385	11,141
Wholesale trade	3,143	3,134	3,120	3,086	3,090	3,091	3,102	3,116	3,161	3,163	3,162	3,153	3,153	3,070	3,013
Wholesalers full-service and limited-function	.....	1,859.6	1,850.4	1,827.7	1,827.7	1,827.4	1,833.7	1,843.7	1,880.1	1,878.6	1,879.0	1,876.8	1,879.6	1,819.2	1,752.0
Automotive	.....	142.4	141.8	140.4	140.3	139.7	139.5	139.9	140.8	140.8	141.5	142.2	142.7	135.2	126.5
Groceries, food specialties, beer, wines, and liquors	.....	315.0	312.8	310.5	313.9	317.1	319.5	320.5	325.8	325.8	318.7	315.5	314.9	309.7	303.1
Electrical goods, machinery, hardware, and plumbing equipment	.....	444.6	440.1	438.7	439.8	440.0	441.5	444.4	449.0	451.0	452.2	454.7	458.4	448.0	439.2
Other full-service and limited-function wholesalers	.....	957.6	955.7	938.1	933.7	930.6	933.2	938.9	964.5	961.0	966.6	964.4	963.6	929.3	883.2
Wholesale distributors, other	.....	1,274.6	1,269.5	1,258.2	1,262.6	1,263.1	1,268.2	1,271.9	1,280.8	1,284.0	1,283.0	1,275.7	1,273.6	1,250.7	1,261.4
Retail trade	8,395	8,409	8,455	8,360	8,299	8,246	8,177	8,348	9,244	8,679	8,580	8,512	8,439	8,315	8,128
General merchandise stores	1,445.6	1,443.1	1,467.0	1,456.9	1,443.1	1,435.7	1,391.7	1,476.2	2,021.9	1,554.6	1,553.5	1,504.1	1,452.5	1,483.5	1,433.8
Department stores and general mail-order houses	.....	925.4	934.0	923.7	921.0	920.3	896.9	954.6	1,308.8	1,070.9	994.0	951.8	922.9	953.4	925.1
Other general merchandise stores	.....	517.7	533.0	533.2	522.1	515.4	494.8	521.6	713.1	583.7	559.5	552.3	529.6	530.1	508.7
Food and liquor stores	1,632.6	1,638.8	1,643.3	1,638.2	1,631.9	1,631.6	1,641.3	1,640.8	1,682.7	1,659.3	1,652.1	1,640.7	1,640.9	1,613.6	1,598.8
Grocery, meat, and vegetable markets	.....	1,198.8	1,199.2	1,198.8	1,196.2	1,198.9	1,206.0	1,208.4	1,228.9	1,217.3	1,210.8	1,195.2	1,190.3	1,175.3	1,149.4
Dairy product stores and dealers	.....	228.0	226.4	220.7	219.4	214.8	213.3	213.0	216.7	216.4	217.5	223.7	228.4	222.7	227.4
Other food and liquor stores	.....	212.0	217.7	218.7	216.3	217.9	222.0	219.4	237.1	225.6	223.8	221.8	222.2	215.6	222.0
Automotive and accessories dealers	802.8	803.8	801.9	793.2	789.9	784.0	786.9	793.7	827.9	813.5	813.4	814.7	819.9	791.0	764.5
Apparel and accessories stores	586.4	591.9	621.2	614.0	603.6	608.3	576.3	614.0	749.4	649.7	633.5	619.7	585.6	606.0	592.1
Other retail trade	3,928.0	3,931.1	3,921.3	3,857.4	3,830.3	3,786.1	3,780.4	3,823.3	3,961.7	3,901.4	3,927.1	3,933.0	3,940.2	3,820.4	3,738.4
Furniture and appliance stores	.....	388.6	386.6	383.6	385.6	387.9	387.8	394.7	415.5	406.0	404.7	398.7	396.8	393.8	390.2
Drug stores	.....	401.7	399.7	395.5	391.7	390.3	389.9	399.4	430.9	405.6	407.8	406.8	400.1	378.2	355.8
Finance, insurance, and real estate	2,589	2,584	2,556	2,528	2,520	2,507	2,494	2,490	2,504	2,499	2,501	2,515	2,536	2,425	2,374
Banks and trust companies	.....	699.1	690.4	684.5	684.9	685.1	684.0	681.7	684.9	683.2	680.6	680.9	686.8	638.4	615.3
Security dealers and exchanges	.....	117.7	115.4	112.1	108.8	105.6	103.3	101.5	101.5	101.4	101.6	102.0	103.4	94.5	84.6
Insurance carriers and agents	.....	972.0	962.7	957.0	956.7	955.6	952.3	946.9	949.0	945.4	941.4	946.3	952.8	904.0	895.0
Other finance agencies and real estate	.....	795.4	787.0	774.5	769.2	760.4	754.6	760.1	768.3	769.3	776.9	785.6	793.4	787.8	779.5
Service and miscellaneous	6,738	6,763	6,795	6,753	6,679	6,566	6,527	6,518	6,612	6,665	6,698	6,698	6,685	6,525	6,395
Hotels and lodging places	.....	579.7	507.8	478.2	463.5	442.5	441.4	436.8	448.5	455.4	465.7	508.9	590.8	505.4	511.3
Personal services:	.....	307.8	307.5												
Laundries	.....	180.0	185.5	302.8	299.1	298.3	296.6	299.8	301.4	303.6	305.5	306.7	310.3	310.9	312.7
Cleaning and dyeing plants	.....	189.2	190.3	181.9	178.8	176.3	173.3	175.3	176.5	179.2	179.9	175.0	170.9	170.6	167.4
Motion pictures	.....			188.8	187.7	182.7	180.9	181.8	183.3	186.1	188.9	193.6	195.4	187.0	189.8
Government	8,543	8,469	8,732	8,752	8,723	8,705	8,674	8,608	8,917	8,636	8,586	8,474	8,140	8,127	7,893
Federal [4]	2,260	2,258	2,241	2,205	2,198	2,186	2,179	2,173	2,471	2,182	2,182	2,185	2,206	2,197	2,191
Executive	.....	2,228.9	2,212.2	2,176.8	2,170.1	2,158.5	2,151.2	2,145.7	2,443.5	2,154.4	2,154.1	2,157.6	2,178.0	2,169.4	2,164.2
Department of Defense	.....	919.1	917.9	913.2	911.0	909.0	908.2	907.0	906.6	907.9	909.4	910.8	919.2	941.3	960.3
Post Office Department	.....	584.9	579.3	571.9	570.4	566.1	564.2	565.1	862.8	570.1	565.0	565.9	566.5	572.9	562.8
Other agencies	.....	724.9	715.0	691.7	688.7	683.4	678.8	673.6	674.1	676.4	679.7	680.9	692.3	655.2	641.1
Legislative	.....	23.6	23.5	23.1	22.9	22.6	22.5	22.5	22.4	22.4	22.4	22.6	22.8	22.5	22.1
Judicial	.....	5.1	5.1	5.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.9	4.9	4.8	4.7
State and local [4]	6,193	6,211	6,491	6,547	6,525	6,519	6,495	6,435	6,446	6,454	6,404	6,289	5,934	5,930	5,702
State	.....	1,589.6	1,646.5	1,661.5	1,650.2	1,642.7	1,635.8	1,620.1	1,618.9	1,618.7	1,614.4	1,580.0	1,530.3	1,524.3	1,470.8
Local	.....	4,621.4	4,844.8	4,885.6	4,874.5	4,876.0	4,859.0	4,815.2	4,826.7	4,834.9	4,789.6	4,709.4	4,403.9	4,405.7	4,231.1
Education	.....	2,690.2	3,029.5	3,174.1	3,173.6	3,176.3	3,169.9	3,128.2	3,139.3	3,137.4	3,098.4	2,926.6	2,525.8	2,721.5	2,563.7
Other	.....	3,520.8	3,461.8	3,373.0	3,351.1	3,342.4	3,324.9	3,307.1	3,306.3	3,316.2	3,305.6	3,362.8	3,408.4	3,208.5	3,138.3

[1] Beginning with the August 1958 issue, figures for 1956–58 differ from those previously published because of the adjustment of the employment estimates to 1st quarter 1957 benchmark levels indicated by data from government social insurance programs. Statistics from 1957 forward are subject to revision when new benchmarks become available.

These series are based upon establishment reports which cover all full- and part-time employees in nonagricultural establishments who worked during, or received pay for, any part of the pay period ending nearest the 15th of the month. Therefore, persons who worked in more than 1 establishment during the reporting period are counted more than once. Proprietors, self-employed persons, unpaid family workers, and domestic servants are excluded.

[2] Preliminary.

[3] Data relate to civilian employees who worked on, or received pay for, the last day of the month.

[4] State and local government data exclude, as nominal employees, elected officials of small local units and paid volunteer firemen.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics for all series except those for the Federal Government, which are prepared by the U.S. Civil Service Commission, and that for Class I railroads, which is prepared by the U.S. Interstate Commerce Commission.

TABLE A–3. Production or nonsupervisory workers in nonagricultural establishments, by industry [1]

[In thousands]

Industry	1961								1960					Annual average	
	Aug.[2]	July[2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1959	1958
Mining	-------	489	498	488	481	480	479	487	498	503	512	516	525	532	572
Metal	-------	72.6	72.6	71.4	69.8	70.1	69.9	73.3	74.0	73.6	76.4	77.3	78.4	65.1	76.5
Iron	-------	23.9	23.5	23.2	22.4	22.6	22.2	23.9	24.9	24.4	27.7	28.2	29.6	22.7	26.1
Copper	-------	26.0	26.4	25.8	25.0	25.0	25.0	26.6	26.6	26.6	26.4	26.3	25.8	18.0	23.4
Lead and zinc	-------	8.1	8.1	8.1	8.1	8.2	8.2	8.4	8.1	7.9	7.6	8.1	8.2	10.0	10.5
Anthracite	-------	7.6	7.6	7.6	8.1	7.2	8.7	8.7	8.7	9.4	10.4	10.2	9.7	14.6	18.5
Bituminous coal	-------	108.8	120.4	119.3	118.9	122.4	124.7	123.9	126.4	128.7	131.0	130.6	136.0	149.2	173.8
Crude-petroleum and natural-gas production	-------	204.9	202.8	197.6	195.6	195.6	194.2	196.0	198.7	196.4	196.7	200.0	202.6	210.2	211.1
Petroleum and natural-gas production (except contract services)	-------	98.3	97.8	95.5	95.4	95.8	96.1	97.5	98.6	98.5	99.0	101.9	103.1	106.1	112.9
Nonmetallic mining and quarrying	-------	95.0	94.3	92.1	88.8	84.6	81.8	84.6	89.7	94.7	97.5	97.6	98.3	92.5	91.9
Contract construction	-------	2,657	2,599	2,374	2,204	2,010	1,864	1,984	2,147	2,433	2,585	2,545	2,705	2,372	2,278
Nonbuilding construction	-------	564	563	496	429	357	320	342	388	487	539	554	576	506	497
Highway and street construction	-------	301.8	297.9	253.8	204.2	158.3	134.8	148.1	176.2	245.8	281.2	286.4	296.1	245.4	231.8
Other nonbuilding construction	-------	262.1	264.6	241.7	224.5	198.2	184.9	193.9	212.2	241.4	258.1	267.2	279.5	260.5	265.1
Building construction	-------	2,093	2,036	1,878	1,775	1,653	1,544	1,642	1,759	1,946	2,046	2,091	2,129	1,866	1,781
General contractors	-------	732.0	707.7	644.9	600.5	552.1	512.5	553.8	599.5	673.0	706.0	732.9	751.9	662.4	668.1
Special-trade contractors	-------	1,360.7	1,327.9	1,232.6	1,174.1	1,101.1	1,031.7	1,088.4	1,159.2	1,272.8	1,340.4	1,358.3	1,377.0	1,203.2	1,122.6
Plumbing and heating	-------	258.0	253.3	245.8	241.5	237.6	233.8	242.3	249.2	255.6	262.0	268.7	262.5	252.8	247.0
Painting and decorating	-------	253.5	232.4	206.8	191.9	167.5	146.2	154.4	174.5	200.1	212.5	222.6	233.6	181.7	153.3
Electrical work	-------	154.6	147.0	136.6	135.5	134.1	135.6	140.8	148.1	153.9	158.6	161.9	166.0	138.3	138.2
Other special-trade contractors	-------	694.6	695.2	643.4	605.2	561.9	516.1	551.2	587.4	663.2	707.3	705.1	714.9	630.4	584.1
Manufacturing	12,057	11,804	11,860	11,643	11,463	11,418	11,395	11,502	11,745	12,037	12,226	12,399	12,265	12,237	11,658
Durable goods	6,682	6,651	6,706	6,595	6,429	6,363	6,359	6,456	6,613	6,786	6,863	6,949	6,833	6,955	6,507
Nondurable goods	5,375	5,153	5,154	5,048	5,034	5,055	5,036	5,046	5,132	5,251	5,363	5,450	5,432	5,282	5,151
Durable goods															
Ordnance and accessories	74.4	73.9	74.0	73.9	72.5	73.4	73.1	73.2	73.6	73.8	72.2	73.5	72.0	72.9	68.4
Lumber and wood products (except furniture)	595.7	591.2	593.0	550.6	519.3	498.2	495.6	507.5	518.2	546.8	580.6	598.4	606.9	591.1	556.9
Logging camps and contractors	-------	127.0	125.3	96.4	80.0	72.2	73.0	80.6	82.3	94.8	110.6	114.8	110.9	92.3	80.1
Sawmills and planing mills	-------	268.5	270.4	262.3	252.5	244.4	243.3	247.0	251.8	264.5	276.4	285.0	293.1	291.5	283.6
Millwork, plywood, and prefabricated structural wood products	-------	111.5	111.6	107.5	103.9	99.3	97.5	98.5	101.7	103.2	107.2	110.5	112.8	117.7	106.5
Wooden containers	-------	36.3	37.6	37.3	35.9	35.3	35.1	35.0	35.8	36.8	37.8	38.5	39.7	40.2	40.6
Miscellaneous wood products	-------	47.9	48.1	47.1	47.0	47.0	46.7	46.4	46.6	47.5	48.6	49.6	50.4	49.4	46.0
Furniture and fixtures	318.6	308.6	308.4	304.3	305.0	302.5	303.1	302.7	309.5	320.5	327.0	328.2	327.2	321.2	297.3
Household furniture	-------	230.5	228.9	227.0	229.3	226.1	226.5	224.5	229.0	237.6	241.9	241.5	241.2	240.8	220.1
Office, public building, and professional furniture	-------	35.3	36.5	35.5	35.6	35.5	35.3	35.7	36.5	37.5	38.8	39.6	39.0	35.9	34.2
Partitions, shelving, lockers, and fixtures	-------	25.3	25.2	24.4	23.4	24.6	24.5	24.6	25.4	26.4	27.4	28.0	28.3	25.6	25.6
Screens, blinds, and miscellaneous furniture and fixtures	-------	17.5	17.8	17.4	16.7	16.3	16.8	17.9	18.6	19.0	18.9	19.1	18.7	18.9	17.4
Stone, clay, and glass products	442.0	430.5	428.4	420.1	410.4	402.1	395.6	400.8	416.1	431.1	441.7	449.2	451.5	449.1	417.8
Flat glass	-------	24.2	23.1	23.3	22.2	23.2	23.2	25.3	26.6	25.6	26.4	26.1	25.5	28.7	23.5
Glass and glassware, pressed or blown	-------	89.1	89.0	88.2	86.5	86.3	84.9	82.7	85.5	87.8	89.6	92.4	90.8	84.7	80.5
Glass products made of purchased glass	-------	13.1	12.8	12.7	12.6	12.9	13.2	13.0	14.2	14.3	14.2	14.0	13.8	15.0	13.3
Cement, hydraulic	-------	32.9	32.8	31.6	30.7	28.3	27.4	28.9	30.1	31.5	33.1	34.2	35.2	34.4	34.6
Structural clay products	-------	60.6	60.0	58.5	57.2	54.6	52.1	53.7	57.3	60.6	62.3	64.0	65.7	65.5	63.4
Pottery and related products	-------	35.4	36.6	36.5	36.5	36.4	36.5	36.6	36.9	38.8	39.9	40.3	40.4	41.3	37.6
Concrete, gypsum, and plaster products	-------	92.9	91.8	88.7	86.2	83.5	81.9	82.9	85.9	89.9	92.5	93.1	93.8	94.3	86.9
Cut-stone and stone products	-------	15.5	15.4	15.5	15.2	14.8	14.6	14.5	15.3	15.7	16.0	16.2	16.0	15.6	15.7
Miscellaneous nonmetallic mineral products	-------	66.8	66.9	65.1	63.3	62.1	61.8	63.2	64.3	66.9	67.7	68.9	68.3	60.6	62.3
Primary metal industries	918.9	899.0	897.7	877.4	844.9	832.7	829.0	837.8	851.2	870.3	891.4	905.0	909.8	916.4	891.0
Blast furnaces, steel works, and rolling mills	-------	434.7	429.4	417.7	398.4	387.2	380.6	377.4	381.4	394.6	409.2	417.6	430.8	416.6	436.8
Iron and steel foundries	-------	175.3	175.8	172.9	167.7	167.8	168.8	173.5	177.8	180.6	182.8	185.7	179.5	192.2	167.4
Primary smelting and refining of nonferrous metals	-------	41.8	42.2	41.0	40.7	41.0	41.7	43.0	43.7	43.7	44.2	44.8	45.8	40.0	43.2
Secondary smelting and refining of nonferrous metals	-------	8.8	8.6	8.3	8.2	8.1	8.0	8.8	8.6	8.7	8.9	9.1	9.0	9.1	8.2
Rolling, drawing, and alloying of nonferrous metals	-------	82.9	84.7	83.4	81.5	80.4	80.3	80.9	82.5	82.6	83.9	84.0	83.7	89.2	80.6
Nonferrous foundries	-------	45.5	46.6	45.6	44.0	44.0	44.7	46.0	47.3	47.9	49.3	49.3	48.6	53.3	46.4
Miscellaneous primary metal industries	-------	110.0	110.4	108.5	104.4	104.2	104.9	108.5	109.9	112.2	113.1	114.5	112.4	116.0	108.4
Fabricated metal products (except ordnance, machinery, and transportation equipment)	808.5	788.5	800.8	788.0	761.5	750.2	754.5	770.6	794.3	816.8	833.8	835.0	819.4	831.6	795.8
Tin cans and other tinware	-------	52.9	51.6	51.1	50.2	48.7	47.4	46.6	47.3	47.8	49.8	53.3	55.8	51.9	50.6
Cutlery, handtools, and hardware	-------	97.2	100.4	99.4	92.7	95.1	96.6	99.6	102.2	103.9	103.9	102.5	100.1	106.2	100.1
Heating apparatus (except electric) and plumbers' supplies	-------	82.1	82.7	82.0	79.3	78.6	77.3	79.1	80.0	81.5	85.1	86.0	85.9	89.5	83.3
Fabricated structural metal products	-------	205.0	202.7	195.8	193.0	189.5	190.1	192.9	201.0	206.1	210.8	211.7	213.4	203.4	220.0
Metal stamping, coating, and engraving	-------	170.9	181.6	181.1	171.9	165.1	168.1	176.2	184.7	193.2	196.6	193.7	180.2	187.8	169.4
Lighting fixtures	-------	35.5	36.3	34.8	34.7	34.7	35.2	35.4	37.3	38.4	38.7	38.6	36.4	38.5	34.2
Fabricated wire products	-------	41.1	42.1	41.8	39.9	39.0	39.7	40.2	41.3	42.4	43.9	44.2	43.4	45.4	41.7
Miscellaneous fabricated metal products	-------	103.8	103.4	102.0	99.8	99.5	100.1	100.6	100.5	103.5	105.0	105.0	104.2	108.9	96.5

See footnotes at end of table.

TABLE A–3. Production or nonsupervisory workers in nonagricultural establishments, by industry [1]—Continued

[In thousands]

Industry	1961								1960					Annual average	
	Aug. [2]	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1959	1958
Manufacturing—Continued															
Durable goods—Continued															
Machinery (except electrical)	1,072.2	1,069.7	1,078.7	1,081.7	1,080.7	1,076.3	1,076.9	1,074.6	1,080.7	1,085.3	1,086.6	1,104.4	1,111.6	1,134.1	1,039.3
Engine and turbines		56.9	57.0	58.8	59.1	58.0	58.0	58.8	59.7	59.5	58.2	61.1	61.0	65.9	60.7
Agricultural machinery and tractors		97.9	100.6	107.4	110.2	108.6	105.7	101.0	97.9	93.5	94.1	93.9	97.1	112.4	94.7
Construction and mining machinery		78.2	78.1	77.4	76.4	75.5	75.3	74.3	74.2	75.1	78.5	81.0	83.1	89.6	82.4
Metalworking machinery		172.2	175.0	171.8	177.0	177.4	177.6	176.6	177.7	179.0	179.0	181.0	181.9	175.6	162.1
Special-industry machinery (except metalworking machinery)		117.7	118.9	118.7	116.9	117.8	119.0	119.4	120.9	121.7	122.3	122.6	122.7	114.9	108.5
General industrial machinery		132.9	133.2	132.0	130.2	130.1	131.0	133.2	135.6	137.9	139.9	142.7	143.5	141.9	128.1
Office and store machines and devices		92.2	92.4	91.9	91.5	90.6	91.5	91.6	92.2	92.6	92.8	92.8	92.2	89.7	84.0
Service-industry and household machines		129.8	131.1	134.7	133.7	133.5	132.9	130.4	129.1	130.1	123.1	130.0	129.7	138.1	123.2
Miscellaneous machinery parts		192.8	192.4	189.0	185.7	184.8	185.9	189.3	193.4	195.9	198.7	199.3	200.4	206.0	185.6
Electrical machinery	863.8	836.2	844.4	836.5	826.5	830.2	835.2	842.1	843.6	866.8	839.1	876.9	861.4	839.7	750.1
Electrical generating, transmission, distribution, and industrial apparatus		271.5	272.4	269.3	266.8	266.0	266.8	268.6	269.9	270.2	253.1	278.5	276.7	273.7	247.8
Electrical appliances		27.2	28.3	27.7	27.4	27.2	26.1	25.7	27.2	31.3	30.3	30.2	28.6	28.2	25.4
Insulated wire and cable		21.6	21.7	19.9	21.3	21.5	21.6	21.7	22.1	22.4	22.2	21.6	21.0	21.6	19.3
Electrical equipment for vehicles		48.7	50.8	50.3	47.3	48.8	50.3	53.1	55.6	56.2	56.1	55.6	51.3	54.4	47.0
Electric lamps		22.1	21.9	22.2	22.4	22.6	23.0	23.4	23.9	24.3	20.0	24.4	24.9	23.9	22.5
Communication equipment		410.7	414.9	413.2	407.7	410.1	413.6	415.5	410.1	426.2	422.8	430.1	422.8	401.6	358.4
Miscellaneous electrical products		34.4	34.4	33.9	33.6	34.0	33.8	34.1	34.8	36.2	34.6	36.5	36.1	36.3	32.7
Transportation equipment	951.7	1,050.3	1,064.2	1,059.2	1,018.4	1,012.6	1,012.4	1,067.9	1,124.6	1,146.6	1,149.3	1,135.1	1,036.2	1,189.5	1,124.0
Motor vehicles and equipment		540.6	552.2	544.1	499.5	489.1	491.7	541.9	595.8	610.4	613.9	597.4	508.7	574.2	480.0
Aircraft and parts		355.4	357.5	359.9	363.6	367.1	366.0	367.2	368.8	372.3	365.7	367.0	364.7	451.1	479.3
Aircraft		197.0	197.3	199.5	202.3	205.0	203.5	206.2	207.7	212.0	212.9	211.5	212.4	268.1	291.5
Aircraft engines and parts		82.0	82.7	83.0	83.5	83.3	82.4	81.2	80.7	79.6	73.9	77.8	74.8	86.5	89.9
Aircraft propellers and parts		6.8	7.0	7.1	7.3	7.3	7.2	6.8	6.7	6.6	6.5	6.6	6.6	9.1	12.2
Other aircraft parts and equipment		69.6	70.5	70.3	70.5	71.5	72.9	73.0	73.7	74.1	72.4	71.1	71.2	87.4	85.7
Ship and boat building and repairing		114.6	114.8	117.2	117.2	118.2	115.6	117.0	116.5	117.3	118.8	118.8	117.8	118.8	121.4
Shipbuilding and repairing		100.8	98.8	99.8	99.3	100.9	99.0	100.4	101.2	100.7	102.9	103.0	102.4	99.9	105.1
Boatbuilding and repairing		13.8	16.0	17.4	17.9	17.3	16.6	16.6	15.3	16.6	15.9	15.8	15.4	18.9	16.3
Railroad equipment		31.8	31.9	30.6	30.9	31.3	32.4	35.9	37.1	39.5	42.6	43.3	36.4	37.1	36.1
Other transportation equipment		7.9	7.8	7.4	7.2	6.9	6.7	5.9	6.4	7.1	8.3	8.6	8.6	8.3	7.3
Instruments and related products	216.5	211.5	214.5	212.2	210.0	210.7	211.4	215.3	218.2	222.0	222.9	225.4	226.1	222.3	206.3
Laboratory, scientific and engineering instruments		30.9	32.9	33.6	34.2	35.0	35.1	35.8	35.9	36.1	36.0	36.2	35.9	35.1	31.6
Mechanical measuring and controlling instruments		63.2	63.6	63.0	62.1	61.6	62.2	62.7	62.7	62.6	63.3	64.2	64.7	62.4	55.8
Optical instruments and lenses		11.7	11.9	11.8	11.6	11.9	11.8	12.1	12.4	12.5	12.6	12.4	12.5	10.7	9.4
Surgical, medical, and dental instruments		29.7	29.8	29.6	29.6	29.7	29.8	29.7	29.8	29.8	30.0	29.8	30.1	28.7	27.3
Ophthalmic goods		19.4	19.4	19.2	18.8	18.5	18.7	18.9	19.4	20.2	20.1	20.6	21.0	20.6	18.4
Photographic apparatus		36.2	36.3	35.6	35.6	35.7	36.1	36.9	37.7	39.1	39.6	39.6	39.7	39.3	39.7
Watches and clocks		20.4	20.6	19.4	18.1	18.3	17.7	19.2	20.3	21.7	21.3	22.6	22.2	25.5	22.9
Miscellaneous manufacturing industries	419.2	391.7	401.4	390.6	379.4	374.5	372.6	363.5	382.7	405.8	418.0	417.5	410.4	386.6	361.0
Jewelry, silverware, and plated ware		33.3	34.5	34.6	34.7	34.7	35.5	35.4	36.4	37.3	38.2	37.8	37.4	36.1	34.5
Musical instruments and parts		14.2	14.3	14.3	14.3	14.4	14.3	14.3	15.3	15.6	15.6	15.6	15.7	15.0	13.6
Toys and sporting goods		82.7	85.0	80.9	74.8	70.0	66.5	59.8	67.6	82.1	89.6	89.1	85.8	70.7	67.5
Pens, pencils, other office supplies		24.0	23.7	23.0	22.8	23.0	23.2	23.3	23.8	24.3	24.9	24.6	24.5	22.8	22.3
Costume jewelry, buttons, notions		42.4	43.9	42.1	41.4	42.8	43.3	42.7	45.1	46.8	48.9	48.8	49.0	48.8	46.4
Fabricated plastics products		74.4	75.3	73.6	71.4	69.7	70.1	6.97	71.6	74.3	74.0	75.1	74.1	72.9	64.8
Other manufacturing industries		120.7	124.7	122.1	120.0	119.9	119.7	118.3	122.9	125.4	126.8	126.8	123.9	120.3	111.9
Nondurable goods															
Food and kindred products	1,157.3	1,055.8	1,008.1	950.8	941.6	931.8	925.1	943.2	984.4	1,035.7	1,112.3	1,170.9	1,142.3	1,025.3	1,035.3
Meat products		242.3	242.4	235.7	231.1	229.7	230.2	237.1	242.4	248.4	248.8	248.3	245.8	240.6	243.5
Dairy products		68.9	67.3	63.3	61.8	59.8	58.2	58.3	59.8	60.4	62.8	65.6	69.0	65.5	66.7
Canning and preserving		222.6	180.4	154.6	155.4	147.5	140.2	141.4	156.6	188.1	254.1	324.8	297.2	189.2	186.6
Grain-mill products		77.8	76.8	74.8	73.7	74.0	73.7	74.7	74.3	74.2	76.9	76.2	77.5	77.9	79.5
Bakery products		164.2	163.6	159.2	157.5	158.2	158.3	158.4	162.0	163.1	165.0	163.8	162.9	162.1	164.9
Sugar		20.0	19.0	19.2	20.7	18.8	19.8	26.2	32.0	36.7	33.6	22.4	20.6	25.3	25.9
Confectionery and related products		51.7	55.2	51.7	51.3	55.2	56.9	57.3	61.0	63.6	64.5	62.4	58.9	59.4	61.6
Beverages		115.6	111.1	108.1	104.4	103.1	101.3	102.1	107.9	110.9	114.3	114.1	115.9	111.5	112.4
Miscellaneous food products		92.7	92.3	87.2	85.7	85.5	86.8	87.7	88.4	90.3	92.3	93.3	94.5	93.5	94.2
Tobacco manufactures	77.5	61.7	64.1	63.3	64.4	67.9	72.1	75.4	78.3	82.0	94.3	97.2	81.2	78.9	80.1
Cigarettes		32.3	32.7	31.9	31.9	32.0	32.2	32.4	32.4	32.6	32.7	33.1	33.5	32.2	31.5
Cigars		18.9	21.0	21.1	21.0	21.6	22.3	22.2	23.4	23.9	24.0	23.8	23.6	23.4	27.4
Tobacco and snuff		4.8	4.9	4.9	4.9	4.9	4.9	4.9	5.0	5.1	5.0	5.0	5.2	5.3	5.4
Tobacco stemming and redrying		5.7	5.5	5.4	6.6	9.4	12.7	15.9	17.5	20.4	32.6	35.3	18.9	18.8	15.8

See footnotes at end of table.

TABLE A–3. Production or nonsupervisory workers in nonagricultural establishments, by industry [1]—Continued

[In thousands]

Industry	1961								1960					Annual average	
	Aug.[2]	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1959	1958
Manufacturing—Continued															
Nondurable goods—Continued															
Textile-mill products	837.0	822.9	832.0	823.0	814.0	807.1	806.2	806.6	819.0	832.3	839.9	849.5	858.6	873.9	850.8
Scouring and combing plants	.....	4.9	5.0	4.7	4.5	4.4	4.2	4.3	4.3	4.4	4.5	4.7	4.9	5.0	4.7
Yarn and thread mills	.....	92.0	92.9	91.6	90.3	89.6	89.4	89.1	91.0	91.8	92.9	94.3	96.0	101.5	99.7
Broad-woven fabric mills	.....	340.9	343.7	341.4	340.9	341.0	343.2	344.9	347.5	349.4	351.4	355.8	359.7	370.5	372.4
Narrow fabrics and smallwares	.....	24.3	24.5	24.5	24.2	23.9	24.0	24.0	24.2	24.5	24.7	25.5	25.7	25.9	23.9
Knitting mills	.....	200.0	203.9	199.4	195.8	190.8	186.4	183.3	188.5	197.5	201.4	203.1	205.7	199.7	186.8
Dyeing and finishing textiles	.....	75.5	75.8	74.9	74.5	73.8	73.5	73.8	74.7	75.2	75.4	75.4	76.8	76.6	73.7
Carpets, rugs, other floor coverings	.....	33.4	34.2	34.5	33.7	34.7	35.1	35.2	35.8	35.9	35.9	36.5	36.3	38.9	36.7
Hats (except cloth and millinery)	.....	8.4	8.6	8.0	7.0	7.5	8.1	8.1	8.2	7.9	7.8	8.2	8.5	8.9	9.0
Miscellaneous textile goods	.....	43.5	44.4	44.0	43.1	41.4	42.3	43.9	44.8	45.7	45.9	46.0	45.0	46.9	43.9
Apparel and other finished textile products	1,084.1	1,024.7	1,047.4	1,034.8	1,041.2	1,073.6	1,063.1	1,037.7	1,051.5	1,079.3	1,078.8	1,094.5	1,107.3	1,080.0	1,027.0
Men's and boys' suits and coats	.....	94.8	99.8	96.1	94.1	98.9	100.6	100.8	101.1	101.9	102.9	103.5	104.7	99.5	95.0
Men's and boys' furnishings and work clothing	.....	310.7	315.7	310.7	308.5	309.2	307.7	301.1	306.7	311.9	317.4	325.3	327.6	308.5	283.9
Women's outerwear	.....	278.6	283.3	285.3	297.3	313.0	304.0	293.6	294.6	302.8	291.8	299.3	309.1	308.0	302.7
Women's, children's undergarments	.....	95.9	100.1	100.1	100.9	101.4	100.7	99.0	102.4	105.7	106.1	105.6	105.6	106.2	101.9
Millinery	.....	15.9	12.6	10.5	13.7	21.4	21.3	17.1	15.1	14.3	16.7	16.8	17.5	16.3	15.7
Children's outerwear	.....	65.6	66.0	63.7	59.9	63.6	65.6	63.9	61.7	63.6	63.9	64.3	66.2	66.3	65.1
Fur goods	.....	5.8	5.9	5.5	4.4	4.5	4.5	4.9	5.9	6.7	6.6	6.4	6.0	7.1	8.2
Miscellaneous apparel and accessories	.....	49.4	51.7	50.7	51.0	52.1	51.3	48.5	51.1	55.0	55.0	55.3	55.3	54.4	50.9
Other fabricated textile products	.....	108.0	112.3	112.2	111.4	109.5	107.4	108.8	112.9	117.4	118.4	118.0	118.3	113.7	103.6
Paper and allied products	443.3	436.1	442.6	434.7	432.9	432.4	431.5	434.2	437.2	444.8	448.8	452.1	451.3	448.6	439.3
Pulp, paper, and paperboard mills	.....	217.5	221.9	217.0	216.3	216.3	216.2	217.4	218.7	221.3	223.1	225.4	226.4	223.1	220.7
Paperboard containers and boxes	.....	116.4	118.4	115.9	114.7	115.0	115.1	116.4	118.9	122.7	124.0	123.8	122.1	122.9	119.6
Other paper and allied products	.....	102.2	102.3	101.8	101.9	101.1	100.2	100.4	99.6	100.8	101.7	102.9	102.8	102.6	99.0
Printing, publishing, and allied industries	571.4	569.7	570.0	566.7	568.4	571.4	568.3	571.1	578.8	584.4	584.6	578.4	572.7	557.8	545.4
Newspapers	.....	163.5	164.3	164.5	164.0	163.5	162.1	163.6	166.6	167.2	166.6	165.3	164.2	161.0	157.2
Periodicals	.....	25.9	26.0	26.7	27.3	27.5	27.5	28.2	28.0	28.5	28.6	28.5	27.5	26.6	25.5
Books	.....	39.0	39.5	39.0	38.7	38.7	38.5	38.8	39.0	38.8	39.1	39.3	38.7	35.5	33.7
Commercial printing	.....	183.9	184.0	182.5	182.8	185.1	184.0	184.7	186.6	187.6	187.9	187.1	184.8	180.2	177.5
Lithographing	.....	52.7	52.1	51.8	52.5	52.5	52.0	51.2	53.0	53.3	53.0	52.7	52.1	50.1	49.7
Greeting cards	.....	16.4	16.1	14.3	14.0	14.0	14.0	14.1	15.3	17.0	17.6	16.6	16.4	15.0	14.2
Bookbinding and related industries	.....	37.9	37.2	36.5	36.9	37.5	37.1	36.8	36.6	37.4	37.6	37.5	38.0	36.3	35.0
Miscellaneous publishing and printing services	.....	50.4	50.8	51.4	52.2	52.6	53.1	53.7	53.7	54.6	54.2	51.1	51.0	52.8	52.6
Chemicals and allied products	538.5	533.9	534.2	535.4	537.2	531.6	525.4	527.9	530.8	533.4	538.1	537.4	537.6	530.9	512.2
Industrial inorganic chemicals	.....	69.4	68.8	67.9	68.1	68.1	67.8	68.7	69.3	69.4	69.4	69.4	69.9	68.4	67.3
Industrial organic chemicals	.....	211.3	208.1	205.9	204.0	203.3	202.1	203.7	205.3	206.0	205.8	207.1	210.3	203.3	191.8
Drugs and medicines	.....	56.7	56.4	55.1	55.0	55.0	55.3	55.6	56.0	56.2	56.5	57.2	57.9	57.1	57.6
Soap, cleaning and polishing preparations	.....	33.0	33.1	32.4	32.7	31.9	31.6	31.9	32.0	31.9	32.4	32.5	32.2	30.3	30.1
Paints, pigments, and fillers	.....	46.4	46.0	45.1	44.1	43.0	43.1	43.7	44.0	44.7	45.5	46.1	46.9	45.4	43.7
Gum and wood chemicals	.....	6.0	6.2	6.1	6.2	6.2	6.2	6.1	6.2	6.2	6.3	6.3	6.4	6.3	6.4
Fertilizers	.....	22.3	25.0	33.5	36.6	33.6	27.7	26.6	25.0	23.6	24.6	23.7	21.6	26.9	26.1
Vegetable and animal oils and fats	.....	22.0	22.8	23.4	24.6	24.9	26.5	27.0	28.0	29.0	29.3	26.6	24.1	27.2	26.1
Miscellaneous chemicals	.....	66.8	67.8	66.0	65.9	65.6	64.5	64.6	65.0	66.4	68.3	68.5	68.3	66.0	63.1
Products of petroleum and coal	144.2	143.7	145.3	143.7	143.1	142.1	142.0	143.8	145.1	147.2	149.7	150.5	153.5	155.4	157.0
Petroleum refining	.....	109.1	110.8	110.4	110.9	111.1	111.7	112.4	112.9	113.2	114.0	115.1	116.7	118.4	121.2
Coke, other petroleum and coal products	.....	34.6	34.5	33.3	32.2	31.0	30.3	31.4	32.2	34.0	35.7	35.4	36.8	37.0	35.8
Rubber products	191.1	187.0	187.9	184.3	180.5	179.7	180.8	187.5	190.6	192.6	197.9	197.8	196.1	199.4	186.0
Tires and inner tubes	.....	69.4	68.6	67.6	67.3	68.1	66.9	70.4	71.5	73.1	73.8	74.5	75.7	74.6	74.7
Rubber footwear	.....	19.6	20.1	19.9	19.3	19.1	18.9	18.3	18.4	17.4	18.5	18.5	18.2	17.9	16.7
Other rubber products	.....	98.0	99.2	96.8	93.9	92.5	95.0	98.8	100.7	102.1	105.6	104.8	102.2	106.9	94.6
Leather and leather products	330.5	317.0	320.9	311.1	310.6	317.6	321.6	318.2	316.6	319.3	318.1	321.2	331.0	331.6	317.7
Leather: tanned, curried, and finished	.....	28.1	29.0	28.8	28.4	28.1	28.4	29.4	29.8	30.0	30.0	30.1	30.4	32.8	33.7
Industrial leather belting and packing	.....	3.9	3.6	3.5	3.5	3.6	3.7	3.7	3.6	3.6	3.6	3.6	3.5	3.8	3.1
Boot and shoe cut stock and findings	.....	17.9	18.4	17.6	17.5	17.9	18.1	18.5	17.4	16.8	16.1	16.0	17.2	17.4	16.2
Footwear (except rubber)	.....	216.3	218.6	212.0	210.4	216.4	219.7	218.1	215.6	213.6	211.4	215.4	222.8	223.7	213.8
Luggage	.....	12.8	12.8	12.5	12.1	11.4	11.3	11.3	11.5	13.4	14.3	14.1	15.0	13.0	12.5
Handbags and small leather goods	.....	25.1	25.0	23.7	26.2	28.3	29.1	27.3	27.6	29.2	29.5	28.2	28.0	27.3	26.1
Gloves and miscellaneous leather goods	.....	12.9	13.5	13.0	12.8	11.9	11.3	9.9	11.1	12.7	13.2	13.8	14.1	13.6	12.3

See footnotes at end of table.

TABLE A–3. Production or nonsupervisory workers in nonagricultural establishments, by industry [1]—Continued

[In thousands]

Industry	1961								1960					Annual average	
	Aug. [2]	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1959	1958
Transportation and public utilities:															
Other public utilities	-------	540	534	528	525	528	526	528	531	531	533	538	540	534	537
Gas and electric utilities	-------	518.9	513.0	508.3	504.9	507.2	506.1	507.9	510.1	510.3	511.8	517.0	517.9	513.0	516.4
Electric light and power utilities	-------	219.6	218.0	215.6	216.0	216.0	216.0	216.6	217.3	217.3	218.1	220.7	223.2	221.8	223.2
Gas utilities	-------	143.1	140.0	139.2	135.6	138.0	138.0	138.9	139.3	139.3	139.4	140.7	137.2	138.0	137.5
Electric light and gas utilities combined	-------	156.2	155.0	153.5	153.3	153.2	152.1	152.4	153.5	153.7	154.3	155.6	157.5	153.2	155.7
Local utilities, not elsewhere classified	-------	21.0	20.6	20.1	20.5	20.5	20.1	20.2	20.5	20.6	21.0	21.4	21.7	20.6	20.4
Wholesale and retail trade:															
Wholesale trade	-------	2,673	2,659	2,628	2,637	2,638	2,649	2,662	2,710	2,712	2,715	2,704	2,705	2,651	2,622
Wholesalers, full-service and limited-function	-------	1,603.2	1,594.1	1,571.6	1,574.7	1,575.1	1,581.9	1,591.7	1,631.3	1,629.0	1,631.6	1,628.9	1,632.7	1,588.8	1,536.7
Automotive	-------	121.7	121.4	119.9	120.0	119.5	119.4	119.8	120.8	121.0	122.1	122.9	123.5	117.5	110.0
Groceries, food specialities, beer, wines, and liquors	-------	277.8	275.6	273.9	277.8	280.7	283.1	283.9	289.6	289.0	283.0	279.9	279.6	276.9	272.2
Electrical goods, machinery, hardware, and plumbing equipment	-------	379.7	375.4	373.3	374.7	375.3	377.1	379.0	383.0	386.0	387.5	390.1	393.8	388.1	382.1
Other full-service and limited-function wholesalers	-------	824.0	821.7	804.5	802.2	799.6	802.3	809.0	837.9	833.0	839.0	836.0	835.8	806.3	772.4
Wholesale distributors, other	-------	1,070.2	1,064.6	1,056.4	1,062.4	1,063.1	1,067.1	1,070.6	1,078.9	1,082.6	1,083.6	1,074.7	1,072.2	1,061.8	1,084.9
Retail trade:															
General merchandise stores	-------	1,335.0	1,353.1	1,343.2	1,330.1	1,329.1	1,282.8	1,367.4	1,912.4	1,546.3	1,443.9	1,395.2	1,344.5	1,383.6	1,334.7
Department stores and general mail-order houses	-------	850.4	857.4	847.9	844.6	845.7	820.6	879.2	1,232.9	995.9	918.5	876.6	847.2	882.6	855.9
Other general merchandise stores	-------	484.6	495.7	495.3	485.5	483.4	462.2	488.2	679.5	550.4	525.4	518.6	497.3	501.0	478.8
Food and liquor stores	-------	1,492.8	1,493.7	1,489.2	1,484.6	1,485.2	1,491.2	1,495.1	1,538.3	1,515.5	1,510.9	1,497.7	1,496.0	1,485.3	1,483.2
Grocery, meat, and vegetable markets	-------	1,123.2	1,122.5	1,120.8	1,119.7	1,121.0	1,126.4	1,129.9	1,154.0	1,143.0	1,138.2	1,122.3	1,114.1	1,102.0	1,078.7
Dairy-product stores and dealers	-------	191.1	189.7	184.3	183.0	179.2	178.3	178.3	181.8	181.4	182.7	188.4	193.7	190.1	198.5
Other food and liquor stores	-------	178.5	181.5	184.1	181.9	185.0	186.5	186.9	202.5	191.1	190.0	187.0	188.2	193.2	206.0
Automotive and accessories dealers	-------	702.0	701.5	694.0	692.2	686.3	689.3	696.1	730.0	715.8	715.7	717.4	723.1	699.8	677.2
Apparel and accessories stores	-------	532.0	557.9	553.8	544.4	549.9	518.6	555.5	689.1	591.6	575.4	562.5	529.5	554.7	542.0
Other retail trade (except eating and drinking places)	-------	2,131.8	2,114.3	2,079.0	2,070.1	2,057.0	2,059.5	2,084.4	2,194.5	2,131.2	2,131.6	2,134.6	2,131.6	2,090.3	2,056.7
Furniture and appliance stores	-------	349.4	346.4	343.3	345.1	348.0	347.9	354.0	374.8	365.8	364.6	358.0	356.3	356.5	354.3
Drug stores	-------	378.4	376.9	373.3	369.8	368.8	367.6	377.0	408.9	384.1	386.1	385.7	378.1	357.7	337.0

[1] For comparability of data with those published in issues prior to August 1958 and coverage of the series, see footnote 1, table A–2.

Production and related workers include working foremen and all nonsupervisory workers (including leadmen and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, packing, warehousing, shipping, maintenance, repair, janitorial, watchman services, product development, auxiliary production for plant's own use (e.g., power-plant), and recordkeeping and other services closely associated with the aforementioned production operations.

[2] Preliminary.

TABLE A–4. Unemployment insurance and employment service programs, selected operations [1]

[All items except average benefit amounts are in thousands]

Item	1961							1960					
	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July
Employment service: [2]													
New applications for work	818	1,018	873	808	895	949	1,065	820	881	858	811	839	789
Nonfarm placements	501	551	520	440	417	342	365	378	430	517	584	556	491
State unemployment insurance programs: [3]													
Initial claims [4] [5]	1,501	1,229	1,368	1,468	1,709	1,919	2,381	2,175	1,744	1,393	1,206	1,407	1,426
Insured unemployment [6] (average weekly volume)	1,958	1,991	2,328	2,779	3,168	3,394	3,266	2,639	2,039	1,678	1,598	1,657	1,686
Rate of insured unemployment [7]	4.8	4.9	5.7	6.8	7.8	8.4	8.1	6.6	5.1	4.2	4.0	4.2	4.3
Weeks of unemployment compensated	6,992	8,273	9,835	10,656	13,334	11,935	11,978	9,105	7,054	5,861	6,238	6,435	5,848
Average weekly benefit amount for total unemployment	$32.91	$32.92	$33.46	$34.18	$34.37	$34.45	$34.34	$34.18	$34.01	$33.73	$33.54	$32.99	$32.37
Total benefits paid	$223,978	$264,448	$320,089	$362,539	$461,543	$399,264	$397,609	$300,204	$231,114	$189,891	$201,805	$206,276	$183,775
Unemployment compensation for ex-servicemen: [8] [9]													
Initial claims [4]	29	26	26	29	35	33	39	36	33	29	27	32	30
Insured unemployment [6] (average weekly volume)	60	61	71	83	91	91	86	71	59	50	49	52	49
Weeks of unemployment compensated	236	291	326	380	370	355	355	279	227	190	210	223	180
Total benefits paid	$7,271	$8,984	$10,190	$11,980	$11,618	$11,002	$11,017	$8,597	$7,016	$5,870	$6,445	$6,850	$5,470
Unemployment compensation for Federal civilian employees: [10] [9]													
Initial claims [4]	15	12	12	13	12	13	19	14	14	14	12	13	15
Insured unemployment [6] (average weekly volume)	32	31	33	36	40	41	40	35	33	30	28	30	30
Weeks of unemployment compensated	115	142	148	167	160	162	164	142	131	115	120	130	107
Total benefits paid	$3,932	$4,913	$5,090	$6,228	$5,504	$5,534	$5,605	$4,817	$4,464	$3,934	$4,059	$4,418	$3,546
Railroad unemployment insurance:													
Applications [11]	100	9	6	6	10	13	38	21	23	20	99	31	81
Insured unemployment (average weekly volume)	83	83	100	107	106	113	123	103	95	82	107	65	61
Number of payments [12]	164	224	283	203	270	242	266	226	194	192	227	152	97
Average amount of benefit payment [13]	$77.88	$78.43	$80.01	$79.57	$81.60	$80.99	$82.69	$82.46	$81.52	$77.50	$80.90	$78.72	$75.74
Total benefits paid [14]	$12,713	$17,551	$20,485	$16,273	$22,274	$19,706	$22,208	$18,793	$16,036	$15,222	$18,332	$12,139	$7,434
All programs: [15]													
Insured unemployment [6] [9]	2,136	2,175	2,543	3,046	3,403	3,638	3,515	2,847	2,225	1,839	1,781	1,804	1,826

[1] Data relate to the United States (including Alaska and Hawaii), except where otherwise indicated.

[2] Includes Guam, Puerto Rico, and the Virgin Islands.

[3] Includes data for Puerto Rico, beginning January 1961 when the Commonwealth's program became part of the Federal-State UI system.

[4] Initial claims are notices filed by workers to indicate they are starting periods of unemployment. Excludes transitional claims.

[5] Includes interstate claims for Puerto Rico and the Virgin Islands for the entire period.

[6] Number of workers reporting the completion of at least 1 week of unemployment.

[7] The rate is the number of insured unemployed expressed as a percent of the average covered employment in a 12-month period.

[8] Excludes data on claims and payments made jointly with other programs.

[9] Includes Puerto Rico and the Virgin Islands.

[10] Excludes data on claims and payments made jointly with State programs.

[11] An application for benefits is filed by a railroad worker at the beginning of his first period of unemployment in a benefit year; no application is required for subsequent periods in the same year.

[12] Payments are for unemployment in 14-day registration periods.

[13] The average amount is an average for all compensable periods, not adjusted for recovery of overpayments or settlement of underpayments.

[14] Adjusted for recovery of overpayments and settlement of underpayments.

[15] Represents an unduplicated count of insured unemployment under the State, Ex-servicemen and UCFE programs and the Railroad Unemployment Insurance Act.

SOURCE: U.S. Department of Labor, Bureau of Employment Security for all items except railroad unemployment insurance, which is prepared by the U.S. Railroad Retirement Board.

B.—Labor Turnover

TABLE B–1. Labor turnover rates, by major industry group [1]

[Per 100 employees]

Major industry group	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
	Accessions: Total [3]														
Manufacturing	3.1	4.2	3.7	3.4	3.3	2.7	3.1	1.9	2.3	2.8	3.8	3.8	2.9	3.6	3.0
Durable goods	3.2	4.2	3.8	3.8	3.7	2.8	3.4	2.0	2.3	3.0	4.2	4.1	2.9	3.8	3.2
Ordnance and accessories	3.0	3.4	2.0	2.2	1.7	2.2	2.3	2.1	2.4	3.9	3.3	2.7	2.2	2.8	2.8
Lumber and wood products	4.6	9.2	6.4	5.9	4.2	3.3	4.6	2.0	1.8	3.4	4.1	4.4	4.2	4.7	4.1
Furniture and fixtures	4.8	4.0	3.0	2.8	2.7	2.5	2.8	1.9	2.1	2.7	3.5	5.3	3.5	4.0	3.4
Stone, clay, and glass products	2.6	4.4	3.6	3.6	3.8	3.0	2.4	1.3	1.5	2.2	2.9	3.2	2.6	3.1	2.9
Primary metal industries	2.8	3.8	4.6	4.1	3.1	2.8	3.4	2.1	2.1	2.3	2.9	3.0	2.3	2.9	2.8
Fabricated metal products	3.9	4.4	4.6	5.0	4.4	3.2	4.2	2.3	2.5	3.3	4.3	5.5	2.9	4.4	3.6
Machinery (except electrical)	2.4	2.9	2.7	2.5	2.5	2.2	2.7	1.7	1.9	2.1	2.6	2.5	2.3	3.2	2.5
Electrical machinery	2.6	3.8	3.0	2.4	2.5	2.6	3.2	1.8	2.3	2.8	3.5	3.4	2.7	3.6	2.8
Transportation equipment	3.2	4.1	4.1	5.1	5.9	3.2	3.9	2.4	3.3	4.3	5.2	6.3	3.1	4.5	4.0
Instruments and related products	2.0	3.0	2.1	1.6	1.6	1.5	1.6	1.3	1.6	1.5	1.8	2.9	1.6	2.5	1.8
Miscellaneous manufacturing	4.7	5.6	5.2	4.5	5.1	4.3	5.0	2.2	2.8	3.7	5.5	5.6	4.8	4.8	4.0
Nondurable goods [4]	3.0	4.0	3.4	2.9	2.5	2.5	2.5	1.8	2.2	2.5	3.1	3.3	2.9	3.1	2.7
Food and kindred products	3.8	6.0	4.7	3.7	3.5	3.3	3.5	2.9	3.2	3.8	4.5	4.0	3.9	4.1	3.5
Tobacco manufactures	1.7	1.2	2.0	.9	.9	1.2	1.4	.5	.9	1.4	1.8	2.6	1.5	1.8	1.6
Textile-mill products	3.3	3.6	3.5	3.1	3.1	2.5	2.5	1.6	2.2	2.5	2.8	3.5	2.9	3.2	3.0
Apparel and other finished textile products	3.5	3.5	3.3	3.1	2.7	3.5	3.1	1.8	2.2	2.7	3.9	4.2	3.8	4.2	3.4
Paper and allied products	2.6	3.9	2.5	2.3	2.0	1.6	2.0	1.2	1.5	1.9	2.6	2.4	2.4	2.6	2.1
Chemicals and allied products	1.6	3.0	1.9	1.8	1.3	1.2	1.2	1.0	1.0	1.3	1.8	1.8	1.6	1.8	1.3
Products of petroleum and coal	.7	2.2	1.5	1.2	.5	.8	.8	.4	.5	.7	.9	1.1	.8	1.0	.7
Rubber products	2.5	3.5	3.8	3.7	2.6	1.9	2.6	1.4	1.6	2.2	2.9	3.6	1.9	2.7	2.6
Leather and leather products	4.2	5.4	5.3	3.6	3.5	3.6	4.0	3.7	4.4	3.9	3.7	4.2	4.0	4.1	3.3
Nonmanufacturing:															
Metal mining	2.0	4.4	3.2	3.3	2.1	2.7	4.3	1.7	1.5	2.1	3.4	2.7	2.8	2.7	2.6
Anthracite mining	------	1.0	.4	1.2	1.7	2.8	2.7	3.6	1.4	1.5	1.5	2.4	1.5	1.6	1.6
Bituminous coal mining	1.3	1.2	2.0	.8	1.6	1.2	1.5	1.0	1.2	1.0	1.2	2.7	1.0	2.3	1.2
	Accessions: New hires														
Manufacturing	1.7	2.2	1.5	1.1	1.0	0.9	1.0	0.7	1.0	1.5	1.9	1.9	1.7	2.0	1.3
Durable goods	1.6	2.0	1.4	1.1	1.0	.8	.9	.7	.9	1.5	1.8	1.8	1.5	2.0	1.3
Ordnance and accessories	1.9	2.2	1.1	1.0	.7	1.1	1.2	1.1	1.4	2.6	1.9	1.7	1.6	1.9	1.7
Lumber and wood products	3.8	5.6	4.5	3.1	1.9	1.4	1.9	1.1	1.1	2.6	3.6	3.6	3.8	3.7	2.7
Furniture and fixtures	2.8	2.3	1.5	1.1	1.3	.9	1.0	.9	1.2	1.8	2.7	4.4	2.7	2.8	1.7
Stone, clay, and glass products	1.2	2.0	1.1	.9	.8	.5	.6	.4	.6	1.1	1.3	1.4	1.3	1.8	.9
Primary metal industries	.7	1.0	.7	.5	.3	.3	.4	.3	.3	.4	.6	.6	.4	1.5	.5
Fabricated metal products	1.7	2.0	1.6	1.3	1.0	.8	.9	.6	.9	1.5	1.9	2.0	1.4	2.1	1.4
Machinery (except electrical)	1.0	1.4	1.0	.9	.8	.7	.8	.5	.7	.9	1.2	1.3	1.1	1.8	.9
Electrical machinery	1.3	1.9	1.2	.9	1.1	1.0	1.0	.7	1.2	1.7	2.2	1.8	1.4	2.2	1.4
Transportation equipment	1.1	1.4	.9	.8	.8	.9	.9	.8	1.1	2.0	1.9	1.6	1.1	1.5	1.3
Instruments and related products	1.5	2.3	1.0	.8	.8	.9	.9	.6	.9	1.0	1.2	1.7	1.2	1.9	.9
Miscellaneous manufacturing	3.2	3.7	2.7	1.7	1.9	1.6	1.6	1.1	1.6	2.5	3.9	4.2	3.2	3.0	1.9
Nondurable goods [4]	1.9	2.5	1.7	1.3	1.1	1.0	1.1	.8	1.1	1.5	2.0	2.1	1.9	2.0	1.3
Food and kindred products	2.1	3.3	1.9	1.3	1.2	.9	1.1	1.0	1.3	2.0	2.5	2.3	2.3	2.0	1.5
Tobacco manufactures	.6	.7	.6	.3	.4	.4	.7	.2	.4	.9	1.2	1.2	.7	1.1	.8
Textile-mill products	2.1	2.4	2.0	1.5	1.3	1.0	1.1	.7	1.1	1.4	1.8	2.2	1.9	2.1	1.5
Apparel and other finished textile products	2.6	2.4	2.0	2.0	1.7	1.5	1.6	.8	1.3	1.9	2.9	3.2	2.9	3.0	1.9
Paper and allied products	1.6	2.7	1.4	1.2	1.0	.7	.8	.6	.9	1.3	1.8	1.7	1.7	1.9	1.3
Chemicals and allied products	1.2	2.2	1.1	.9	.8	.7	.6	.5	.7	.8	1.4	1.2	1.2	1.3	.8
Products of petroleum and coal	.4	1.6	.6	.3	.2	.3	.3	.2	.3	.5	.6	.6	.6	.6	.3
Rubber products	1.1	1.4	1.1	.8	.6	.5	.5	.3	.5	.9	1.7	1.4	.8	1.7	.9
Leather and leather products	2.9	3.2	2.6	1.8	1.6	1.7	2.4	2.1	2.0	2.0	2.5	2.8	2.9	2.6	1.7
Nonmanufacturing:															
Metal mining	1.3	2.4	1.4	1.0	.8	1.0	1.2	.9	1.0	1.4	1.7	1.2	1.7	1.4	.7
Anthracite mining	------	.1	.2	.1	.3	.2	.8	1.5	.2	.2	.3	.9	.2	.3	.4
Bituminous coal mining	.5	.3	.3	.2	.2	.3	.8	.2	.4	.5	.4	.5	.4	.4	.3

See footnotes at end of table.

TABLE B–1. Labor turnover rates, by major industry group [1]—Continued

[Per 100 employees]

Major industry group	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
Separations: Total [3]															
Manufacturing	3.1	2.9	2.8	2.8	3.4	3.6	4.3	4.1	3.9	3.8	4.4	4.3	3.6	3.4	3.6
Durable goods	3.4	3.0	2.9	2.9	3.7	4.1	4.9	4.5	4.2	4.0	4.6	4.6	4.0	3.5	3.9
Ordnance and accessories	2.8	2.3	2.7	2.4	2.8	2.5	2.8	2.4	2.5	2.7	4.1	2.2	2.5	2.3	2.9
Lumber and wood products	2.8	3.5	3.5	3.0	4.6	4.0	4.8	5.0	6.7	6.0	6.6	5.7	4.6	4.6	4.2
Furniture and fixtures	3.4	2.5	3.5	3.2	3.8	3.3	4.1	4.0	4.6	4.8	4.7	4.1	3.7	3.7	3.7
Stone, clay, and glass products	2.4	2.4	2.3	3.2	3.2	3.2	5.0	4.6	3.8	3.1	4.3	3.6	3.2	2.8	3.5
Primary metal industries	2.1	2.1	2.2	2.0	2.8	3.2	4.1	4.6	4.7	4.6	4.6	4.5	4.4	2.3	3.3
Fabricated metal products	3.6	4.0	3.0	2.7	4.6	5.1	6.9	6.6	4.4	4.9	5.0	5.0	4.9	4.3	4.3
Machinery (except electrical)	2.2	2.6	2.6	2.3	2.8	2.7	3.1	2.8	2.9	3.2	4.1	3.8	3.0	2.7	3.3
Electrical machinery	2.5	2.5	2.3	2.6	2.8	2.9	3.8	3.2	3.4	2.8	3.6	2.9	2.6	2.8	3.1
Transportation equipment	7.2	4.1	4.0	4.4	5.7	7.6	7.7	5.3	4.6	4.3	4.8	7.4	6.1	5.2	5.1
Instruments and related products	1.8	1.7	1.5	1.8	1.8	1.8	1.9	1.8	2.2	1.7	3.3	2.8	2.2	2.1	2.4
Miscellaneous manufacturing	3.6	3.8	3.8	3.6	4.0	4.0	4.9	9.1	6.9	5.3	5.3	5.0	3.6	4.7	4.7
Nondurable goods [4]	2.6	2.5	2.5	2.7	2.8	2.8	3.2	3.3	3.4	3.4	4.2	3.6	3.0	3.0	3.0
Food and kindred products	3.3	3.2	3.4	3.4	3.9	4.2	4.1	4.4	4.4	4.0	5.2	4.5	3.6	4.0	3.8
Tobacco manufactures	1.6	1.5	1.9	2.4	2.6	1.6	2.1	1.7	1.6	1.8	1.9	2.3	2.1	1.9	2.1
Textile-mill products	2.9	2.8	2.8	2.6	3.0	2.8	3.7	3.5	3.1	3.7	4.5	4.0	3.4	3.3	3.4
Apparel and other finished textile products	3.1	2.9	3.0	3.8	2.8	2.8	3.5	3.7	4.4	4.1	4.4	4.4	4.2	3.8	3.8
Paper and allied products	2.1	2.1	1.9	2.1	2.3	2.3	2.7	2.8	2.8	2.8	4.2	2.9	2.3	2.6	2.4
Chemical and allied products	1.4	1.4	1.3	1.4	1.4	1.4	1.7	1.8	1.9	1.5	3.2	2.0	1.4	1.6	1.8
Products of petroleum and coal	.8	1.0	.9	1.0	1.0	.7	1.2	1.8	1.5	2.3	2.6	1.4	1.6	1.1	1.3
Rubber products	2.0	2.4	2.0	1.9	3.2	4.2	3.9	3.7	3.8	3.4	3.3	3.1	2.3	2.5	2.7
Leather and leather products	3.5	3.6	3.5	4.4	4.5	3.8	3.6	3.4	3.5	5.0	4.8	4.8	3.4	3.9	3.7
Nonmanufacturing:															
Metal mining	1.8	2.0	2.6	2.2	2.9	2.4	7.2	6.2	4.3	3.6	4.3	3.7	3.3	2.6	3.1
Anthracite mining	------	3.5	2.8	2.2	2.1	2.5	4.2	5.7	3.1	8.1	2.9	1.8	7.7	2.9	4.3
Bituminous coal mining	2.1	1.5	2.0	1.9	3.2	3.2	1.5	5.0	2.0	1.9	1.8	3.3	10.0	3.6	2.5
Separations: Quits															
Manufacturing	0.9	1.0	0.8	0.8	0.7	0.6	0.7	0.6	0.7	1.0	1.9	1.5	1.1	1.3	0.9
Durable goods	.8	.9	.7	.7	.6	.5	.6	.5	.6	.9	1.7	1.3	1.0	1.2	.8
Ordnance and accessories	.9	.7	.7	.7	.7	.7	.8	.6	.7	.9	1.9	1.1	.9	1.1	.8
Lumber and wood products	1.6	1.8	1.6	1.4	1.1	1.0	1.2	.9	1.1	1.6	4.0	3.1	2.4	2.3	1.7
Furniture and fixtures	1.3	1.1	1.1	1.0	1.0	.7	.9	.8	.9	1.6	2.5	2.3	1.6	1.7	1.1
Stone, clay, and glass products	.6	.7	.6	.5	.6	.4	.6	.4	.5	.7	1.6	1.1	.8	.9	.7
Primary metal industries	.3	.4	.4	.4	.3	.3	.3	.2	.3	.4	.7	.5	.4	.7	.4
Fabricated metal products	.8	.8	.7	.7	.6	.4	.5	.4	.5	.8	1.6	1.2	.8	1.1	.8
Machinery (except electrical)	.6	.6	.5	.5	.5	.4	.5	.4	.5	.6	1.2	.9	.7	.9	.6
Electrical machinery	.9	.9	.7	.7	.7	.7	.9	.7	.8	1.0	1.8	1.2	.9	1.3	.9
Transportation equipment	.6	.7	.6	.6	.6	.5	.6	.4	.5	.8	1.2	.9	.8	1.0	.8
Instruments and related products	.9	.9	.6	.6	.6	.6	.6	.6	.7	.7	1.7	1.2	.8	1.0	.7
Miscellaneous manufacturing	1.3	1.6	1.3	1.0	1.0	1.0	1.0	.9	1.2	1.8	3.0	2.4	1.8	1.8	1.2
Nondurable goods [4]	1.1	1.1	1.0	1.0	.9	.8	.9	.7	1.0	1.2	2.3	1.8	1.4	1.4	1.0
Food and kindred products	.8	.9	.8	.7	.7	.6	.8	.6	.9	1.1	2.1	1.6	1.1	1.2	.9
Tobacco manufactures	.6	.6	.6	1.1	.8	.8	.9	.6	.7	.9	1.2	1.2	1.2	1.1	.9
Textile-mill products	1.5	1.4	1.4	1.2	1.1	.9	1.0	.8	1.0	1.4	2.2	2.1	1.7	1.6	1.2
Apparel and other finished textile products	2.0	1.9	1.8	1.8	1.6	1.6	1.7	1.3	1.8	2.3	3.0	3.2	2.8	2.5	1.7
Paper and allied products	.7	.8	.7	.6	.6	.5	.6	.5	.6	.9	2.5	1.5	.9	1.2	.8
Chemicals and allied products	.5	.6	.5	.4	.4	.4	.5	.4	.4	.6	1.9	1.0	.6	.7	.5
Products of petroleum and coal	.2	.3	.2	.2	.2	.2	.2	.2	.3	.4	1.1	.6	.3	.4	.3
Rubber products	.6	.8	.7	.5	.5	.4	.5	.4	.5	.6	1.1	.9	.7	.9	.6
Leather and leather products	2.1	2.1	1.8	1.6	1.6	1.5	1.6	1.4	1.6	1.9	3.0	3.0	2.2	2.1	1.5
Nonmanufacturing:															
Metal mining	1.1	1.0	1.1	.9	.9	.6	.9	.9	.8	.9	1.8	1.6	1.6	1.4	1.3
Anthracite mining	------	.4	(5)	.3	(5)	.4	(5)	.1	.2	.1	.5	.2	.1	.3	.3
Bituminous coal mining	.3	.2	.3	.2	.3	.2	.2	.2	.2	.3	.4	.3	.4	.3	.3

See footnotes at end of table.

TABLE B–1. Labor turnover rates, by major industry group [1]—Continued

[Per 100 employees]

Major industry group	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
	Separations: Layoffs														
Manufacturing	1.7	1.3	1.4	1.5	2.2	2.5	3.0	3.0	2.7	2.2	2.0	2.2	2.0	1.6	2.3
Durable goods	2.1	1.6	1.6	1.6	2.5	3.0	3.7	3.5	3.1	2.6	2.2	2.7	2.5	1.8	2.6
Ordnance and accessories	1.2	1.0	1.4	1.0	1.3	1.1	1.2	1.1	1.2	1.4	1.5	.7	1.3	.7	1.8
Lumber and wood products	.6	1.2	1.3	1.1	2.9	2.5	3.1	3.7	3.1	3.8	1.9	1.9	1.5	1.7	2.1
Furniture and fixtures	1.5	1.0	1.9	1.7	2.3	2.0	2.5	2.7	3.2	2.6	1.5	1.2	1.5	1.4	2.2
Stone, clay, and glass products	1.2	1.1	1.2	2.1	2.1	2.4	4.0	3.8	2.8	1.9	2.2	1.8	1.9	1.4	2.5
Primary metal industries	1.1	1.1	1.2	1.2	2.0	2.4	3.3	3.9	3.9	3.7	3.3	3.5	3.4	1.0	2.6
Fabricated metal products	2.2	2.6	1.7	1.6	3.6	4.2	5.8	5.8	3.4	3.5	2.8	3.2	3.5	2.7	3.1
Machinery (except electrical)	1.2	1.4	1.6	1.2	1.6	1.8	2.1	1.9	2.1	2.1	2.3	2.4	1.8	1.2	2.4
Electrical machinery	1.2	.8	1.0	1.2	1.4	1.6	2.1	1.9	1.9	1.2	1.0	1.1	1.1	.9	1.8
Transportation equipment	6.0	2.7	2.6	3.0	4.6	6.7	6.6	4.4	3.5	2.8	2.8	5.8	4.7	3.6	3.8
Instruments and related products	.5	.5	.4	.9	.9	.7	1.0	.8	1.2	.7	1.2	1.1	1.0	.6	1.3
Miscellaneous manufacturing	1.6	1.5	1.9	1.9	2.4	2.5	3.3	7.7	5.2	2.8	1.4	1.7	1.2	2.3	3.1
Nondurable goods [4]	1.0	.9	1.0	1.3	1.5	1.6	1.8	2.1	2.0	1.7	1.4	1.2	1.1	1.2	1.7
Food and kindred products	2.0	1.8	2.1	2.2	2.6	3.2	2.9	3.3	3.1	2.3	2.6	2.4	2.0	2.4	2.5
Tobacco manufactures	.8	.6	1.1	1.1	1.5	.6	.9	.8	.7	.5	.4	.6	.7	.5	.9
Textile-mill products	.9	.9	.9	1.0	1.5	1.5	2.2	2.3	1.7	1.9	1.7	1.4	1.2	1.2	1.8
Apparel and other finished textile products	.6	.8	.9	1.6	.9	.9	1.5	2.1	2.3	1.5	1.0	.8	.8	.9	1.8
Paper and allied products	.8	.8	.7	1.0	1.2	1.4	1.5	1.8	1.7	1.4	1.0	.8	.8	.9	1.3
Chemicals and allied products	.4	.4	.5	.6	.6	.6	.9	1.1	1.1	.6	.8	.5	.4	.5	1.0
Products of petroleum and coal	.2	.2	.3	.5	.5	.2	.3	1.1	.9	1.3	.9	.5	.8	.4	.6
Rubber products	1.0	.9	.8	.8	2.2	3.3	2.9	2.9	2.9	2.3	1.7	1.7	1.2	1.1	1.8
Leather and leather products	.9	.9	1.0	2.1	2.2	1.6	1.6	1.4	1.4	2.5	1.1	1.1	.7	1.2	1.8
Nonmanufacturing:															
Metal mining	.2	.2	.8	.6	1.2	.8	5.4	3.9	2.8	2.0	1.6	1.0	1.1	.6	2.2
Anthracite mining		2.3	2.6	1.3	1.1	1.5	2.0	4.5	2.4	7.3	1.3	.6	6.1	1.7	3.7
Bituminous coal mining	1.5	.9	1.3	1.2	2.6	2.7	1.0	4.4	1.4	1.3	1.0	2.6	8.7	3.1	2.0

[1] Month-to-month changes in total employment in manufacturing and nonmanufacturing industries as indicated by labor turnover rates are not comparable with the changes shown by the Bureau's employment series for the following reasons:

(1) The labor turnover series measures changes during the calendar month, while the employment series measures changes from midmonth to midmonth;

(2) Industry coverage is not identical, as the printing and publishing industry and some seasonal industries are excluded from turnover;

(3) Turnover rates tend to be understated because small firms are not as prominent in the turnover sample as in the employment sample; and

(4) Reports from plants affected by work stoppages are excluded from the turnover series but the employment series reflects the influence of such stoppages.

[2] Preliminary.

[3] Beginning with January 1959, transfers between establishments of the same firm are included in total accessions and total separations; therefore, rates for these items are not strictly comparable with prior data. Transfers comprise part of other accessions and other separations, the rates for which are not shown separately.

[4] Excludes the printing, publishing, and allied industries group, and the following industries: Canning and preserving; women's, misses', and children's outerwear; and fertilizer.

[5] Less than 0.05.

C.—Earnings and Hours

TABLE C–1. Gross hours and earnings of production workers,[1] by industry

Industry	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1960	1958
Average weekly earnings															
Mining	$114.66	$111.38	$108.81	$107.32	$104.10	$107.71	$109.60	$106.38	$105.32	$108.41	$107.47	$108.67	$111.22	$107.73	$100.10
Metal	113.30	113.02	108.67	110.02	108.13	109.35	110.30	111.79	108.54	110.43	112.74	111.49	111.37	103.31	96.22
Iron	119.10	117.32	109.67	109.07	104.49	106.56	109.74	108.92	106.19	110.21	115.95	113.88	117.67	107.34	100.27
Copper	114.11	115.72	111.49	115.72	114.59	114.97	114.86	117.02	115.18	115.72	116.75	116.24	112.14	106.17	94.62
Lead and zinc	91.71	90.57	88.46	87.75	88.43	92.57	91.43	91.60	87.10	86.79	87.17	88.62	91.66	90.63	85.93
Anthracite	106.26	91.19	90.12	84.89	90.58	106.19	107.90	95.35	94.46	95.22	84.39	94.26	93.50	84.98	76.01
Bituminous coal	128.37	123.38	114.75	106.93	98.48	110.85	112.52	109.54	104.33	111.51	108.23	114.10	121.60	118.30	102.38
Crude-petroleum and natural-gas production:															
Petroleum and natural-gas production (except contract services)	123.43	117.38	117.38	121.66	116.98	118.48	124.74	114.05	115.18	115.87	116.44	112.44	116.16	114.93	109.75
Nonmetallic mining and quarrying	104.31	103.45	100.95	97.75	95.49	95.68	97.02	95.17	98.18	102.12	101.66	102.37	102.60	98.48	89.63
Contract construction	126.41	126.79	123.03	120.33	119.64	122.40	122.72	115.26	117.20	125.50	123.13	124.31	123.61	114.82	110.47
Nonbuilding construction	127.51	127.00	121.39	115.44	116.10	118.78	120.17	113.39	114.64	128.65	126.42	126.90	124.91	113.24	109.47
Highway and street construction	123.52	121.18	113.54	104.25	104.06	105.03	108.64	101.80	106.75	126.43	123.98	124.26	122.36	108.09	104.14
Other nonbuilding construction	131.78	133.82	129.68	125.84	126.29	128.44	128.95	122.62	122.68	131.02	128.88	129.97	127.80	118.40	114.26
Building construction	126.32	126.32	123.54	121.45	120.41	123.19	123.53	115.56	117.90	125.17	122.40	123.68	123.68	115.28	110.67
General contractors	117.21	116.52	114.28	111.65	109.65	113.56	114.48	106.23	109.02	114.66	112.73	113.52	113.77	106.39	102.53
Special-trade contractors	131.41	131.77	128.51	126.35	125.99	127.78	128.15	120.24	122.82	129.93	127.44	128.82	128.83	120.27	115.28
Plumbing and heating	139.83	138.34	137.62	136.52	135.41	136.52	138.71	133.22	130.32	137.52	134.61	135.58	135.20	128.56	123.23
Painting and decorating	122.15	122.15	119.02	120.40	116.26	116.55	115.55	110.72	113.88	122.11	119.70	119.68	120.70	113.40	107.98
Electrical work	154.37	156.35	154.71	153.95	156.35	154.39	153.60	148.92	149.31	155.62	151.70	151.32	150.93	142.08	135.97
Other special-trade contractors	126.38	127.45	122.48	117.94	117.57	120.36	120.37	110.53	116.25	124.23	121.80	124.85	124.21	113.80	109.31
Average weekly hours															
Mining	42.0	41.1	40.3	39.6	38.7	39.6	40.0	39.4	39.3	40.3	40.1	40.7	41.5	40.5	39.1
Metal	41.2	41.4	40.1	40.3	39.9	40.5	40.7	41.1	40.2	40.6	41.6	41.6	41.4	40.2	38.8
Iron	39.7	39.5	37.1	36.6	35.3	36.0	37.2	37.3	37.0	38.4	40.4	40.1	41.0	37.4	36.2
Copper	41.8	42.7	41.6	42.7	42.6	42.9	42.7	43.5	42.5	42.7	43.4	43.7	42.0	42.3	39.1
Lead and zinc	39.7	39.9	38.8	39.0	39.3	40.6	40.1	40.0	38.2	37.9	37.9	38.7	40.2	40.1	39.6
Anthracite	39.5	33.9	33.5	31.2	33.8	37.0	38.4	34.8	34.6	34.5	30.8	34.4	34.0	30.9	28.9
Bituminous coal	38.9	37.5	35.2	32.9	30.3	33.9	34.2	33.6	32.1	34.1	33.2	35.0	37.3	36.4	33.9
Crude-petroleum and natural-gas production:															
Petroleum and natural-gas production (except contract services)	41.7	40.2	40.2	41.1	40.2	40.3	42.0	40.3	40.7	40.8	41.0	40.3	40.9	40.9	40.8
Nonmetallic mining and quarrying	44.2	44.4	43.7	42.5	41.7	41.6	42.0	41.2	42.5	44.4	44.2	44.9	45.0	43.8	43.3
Contract construction	37.4	37.4	36.4	35.6	35.5	36.0	36.2	34.1	35.3	37.8	37.2	37.9	37.8	36.8	36.7
Nonbuilding construction	41.4	41.1	39.8	38.1	38.7	39.2	39.4	37.3	38.6	42.6	42.0	42.3	42.2	40.3	40.1
Highway and street construction	42.3	41.5	39.7	37.5	38.4	38.9	38.8	36.1	38.4	43.9	43.5	43.6	43.7	41.1	41.0
Other nonbuilding construction	40.3	40.8	39.9	38.6	39.1	39.4	39.8	38.2	38.7	41.2	40.4	41.0	40.7	39.6	39.4
Building construction	36.3	36.3	35.5	35.0	34.8	35.4	35.6	33.4	34.5	36.6	36.0	36.7	36.7	35.8	35.7
General contractors	36.4	36.3	35.6	35.0	34.7	35.6	36.0	33.3	34.5	36.4	35.9	36.5	36.7	35.7	35.6
Special-trade contractors	36.3	36.4	35.5	35.0	34.9	35.2	35.4	33.4	34.5	36.6	36.0	36.7	36.6	35.9	35.8
Plumbing and heating	38.1	37.9	37.6	37.3	37.2	37.3	37.9	36.6	36.2	38.2	37.6	38.3	38.3	37.7	37.8
Painting and decorating	34.8	35.0	34.2	34.4	33.6	33.3	33.3	32.0	33.2	35.6	35.0	35.4	35.5	35.0	34.6
Electrical work	38.4	38.7	38.2	38.2	38.7	38.5	38.4	37.7	37.8	39.1	38.7	38.9	38.7	38.4	38.3
Other special-trade contractors	35.7	35.8	34.6	33.6	33.4	34.0	34.1	31.4	33.5	35.8	35.1	36.1	35.9	34.8	34.7
Average hourly earnings															
Mining	$2.73	$2.71	$2.70	$2.71	$2.69	$2.72	$2.74	$2.70	$2.68	$2.69	$2.68	$2.67	$2.68	$2.66	$2.56
Metal	2.75	2.73	2.71	2.73	2.71	2.70	2.71	2.72	2.70	2.72	2.71	2.68	2.69	2.57	2.48
Iron	3.00	2.97	2.94	2.98	2.96	2.96	2.95	2.92	2.87	2.87	2.87	2.84	2.87	2.87	2.77
Copper	2.73	2.71	2.68	2.71	2.69	2.68	2.69	2.69	2.71	2.71	2.69	2.66	2.67	2.51	2.42
Lead and zinc	2.31	2.27	2.28	2.25	2.25	2.28	2.28	2.29	2.28	2.29	2.30	2.29	2.28	2.26	2.17
Anthracite	2.69	2.69	2.69	2.72	2.68	2.87	2.81	2.74	2.73	2.76	2.74	2.74	2.75	2.75	2.63
Bituminous coal	3.30	3.29	3.26	3.25	3.25	3.27	3.29	3.26	3.25	3.27	3.26	3.26	3.26	3.25	3.02
Crude-petroleum and natural-gas production:															
Petroleum and natural-gas production (except contract services)	2.96	2.92	2.92	2.96	2.91	2.94	2.97	2.83	2.83	2.84	2.84	2.79	2.84	2.81	2.69
Nonmetallic mining and quarrying	2.36	2.33	2.31	2.30	2.29	2.30	2.31	2.31	2.31	2.30	2.30	2.28	2.28	2.18	2.07
Contract construction	3.38	3.39	3.38	3.38	3.37	3.40	3.39	3.38	3.32	3.32	3.31	3.28	3.27	3.12	3.01
Nonbuilding construction	3.08	3.09	3.05	3.03	3.00	3.03	3.05	3.04	2.97	3.02	3.01	3.00	2.96	2.81	2.73
Highway and street construction	2.92	2.92	2.86	2.78	2.71	2.70	2.80	2.82	2.78	2.88	2.85	2.85	2.80	2.63	2.54
Other nonbuilding construction	3.27	3.28	3.25	3.26	3.23	3.26	3.24	3.21	3.17	3.18	3.19	3.17	3.14	2.99	2.90
Building construction	3.48	3.48	3.48	3.47	3.46	3.48	3.47	3.46	3.42	3.42	3.40	3.37	3.37	3.22	3.10
General contractors	3.22	3.21	3.21	3.19	3.16	3.19	3.18	3.19	3.16	3.15	3.14	3.11	3.10	2.98	2.88
Special-trade contractors	3.62	3.62	3.62	3.61	3.61	3.63	3.62	3.60	3.56	3.55	3.54	3.51	3.52	3.35	3.22
Plumbing and heating	3.67	3.65	3.66	3.66	3.64	3.66	3.66	3.64	3.60	3.60	3.58	3.54	3.53	3.41	3.26
Painting and decorating	3.51	3.49	3.48	3.50	3.46	3.50	3.47	3.46	3.43	3.43	3.42	3.38	3.40	3.24	3.12
Electrical work	4.02	4.04	4.05	4.03	4.04	4.01	4.00	3.95	3.95	3.98	3.92	3.89	3.90	3.70	3.55
Other special-trade contractors	3.54	3.56	3.54	3.51	3.52	3.54	3.53	3.52	3.47	3.47	3.47	3.45	3.46	3.27	3.15

See footnotes at end of table.

TABLE C–1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961							1960						Annual average	
	July[2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
Average weekly earnings															
Manufacturing	$94.00	$94.24	$92.66	$91.57	$90.71	$90.25	$90.25	$89.55	$90.39	$91.31	$91.08	$90.35	$91.14	$89.47	$83.80
Durable goods	101.15	101.91	100.50	99.35	97.96	97.07	97.22	96.97	97.42	98.89	98.15	97.20	97.76	97.10	90.06
Nondurable goods	84.74	84.53	83.07	82.43	82.04	81.02	81.41	80.18	81.48	81.51	81.72	81.77	82.37	79.60	78.27
Durable goods															
Ordnance and accessories	111.65	110.70	110.98	110.16	109.89	109.48	109.48	108.14	109.34	108.27	108.14	105.60	105.20	105.06	101.43
Lumber and wood products	82.35	84.65	83.20	81.37	77.80	76.23	77.60	77.59	77.18	81.58	84.19	81.97	81.35	79.79	78.41
Sawmills and planing mills	80.20	81.80	80.39	78.21	74.69	73.54	74.11	74.30	74.30	77.61	80.00	80.00	79.00	77.74	73.22
Millwork, plywood, and prefabricated structural wood products	86.24	87.97	86.48	86.27	83.18	80.70	80.88	81.54	79.93	83.20	82.56	84.00	82.89	84.05	79.38
Wooden containers	64.37	62.68	61.61	60.34	58.71	58.71	57.51	56.85	59.19	60.89	59.37	60.74	63.14	59.79	56.88
Miscellaneous wood products	68.91	70.69	69.43	69.36	67.87	67.37	66.97	66.36	68.28	69.70	69.19	68.45	68.61	66.42	63.52
Furniture and fixtures	74.61	75.01	72.56	72.93	72.74	71.98	71.24	75.01	74.05	75.55	75.74	75.89	74.40	74.44	70.31
Household furniture	70.05	70.45	67.58	68.85	67.85	67.20	66.33	70.80	69.52	71.10	71.46	71.23	69.30	70.93	66.76
Office, public-building, and professional furniture	86.24	85.84	85.41	84.56	86.03	85.84	84.99	86.43	85.81	88.99	88.58	89.03	88.40	85.49	79.79
Partitions, shelving, lockers, and fixtures	98.15	98.58	97.20	93.45	94.14	94.71	92.88	92.49	94.95	95.83	95.20	97.27	97.68	91.66	85.97
Screens, blinds, and miscellaneous furniture and fixtures	80.38	81.19	77.41	77.03	76.63	75.47	75.86	76.44	77.79	79.95	77.20	77.76	76.57	73.93	71.56
Average weekly hours															
Manufacturing	40.0	40.1	39.6	39.3	39.1	38.9	38.9	38.6	39.3	39.7	39.6	39.8	39.8	40.3	39.2
Durable goods	40.3	40.6	40.2	39.9	39.5	39.3	39.2	39.1	39.6	40.2	39.9	40.0	39.9	40.8	39.5
Nondurable goods	39.6	39.5	39.0	38.7	38.7	38.4	38.4	38.0	38.8	39.0	39.1	39.5	39.6	39.6	38.8
Durable goods															
Ordnance and accessories	40.6	40.7	40.8	40.8	40.7	40.7	40.7	40.2	40.8	40.4	40.5	40.0	40.0	41.2	40.9
Lumber and wood products	39.4	40.5	40.0	39.5	38.9	38.5	38.8	38.6	38.4	39.6	39.9	39.6	39.3	40.5	39.9
Sawmills and planing mills	40.1	40.9	40.6	39.7	38.9	38.5	38.6	38.9	38.9	39.8	40.2	40.2	39.9	40.7	39.8
Millwork, plywood, and prefabricated structural wood products	40.3	41.3	40.6	40.5	39.8	38.8	38.7	39.2	38.8	40.0	39.5	40.0	39.1	41.0	40.5
Wooden containers	41.0	40.7	40.8	39.7	39.4	39.4	38.6	37.9	39.2	39.8	38.3	39.7	41.0	40.4	39.5
Miscellaneous wood products	40.3	41.1	40.6	40.8	40.4	40.1	40.1	39.5	40.4	41.0	40.7	40.5	40.6	41.0	40.2
Furniture and fixtures	39.9	39.9	38.8	39.0	38.9	38.7	38.3	39.9	39.6	40.4	40.5	40.8	40.0	40.9	39.5
Household furniture	39.8	39.8	38.4	38.9	38.6	38.4	37.9	40.0	39.5	40.4	40.6	40.7	39.6	41.0	39.5
Office, public-building, and professional furniture	40.3	40.3	40.1	39.7	40.2	40.3	39.9	40.2	40.1	41.2	41.2	41.8	41.5	41.1	39.5
Partitions, shelving, lockers, and fixtures	39.9	40.4	40.0	39.1	38.9	39.3	38.7	38.7	39.4	39.6	39.5	40.7	40.7	40.2	38.9
Screens, blinds, and miscellaneous furniture and fixtures	40.8	40.8	39.9	39.5	39.5	38.7	38.9	39.2	40.1	41.0	40.0	40.5	40.3	40.4	40.5
Average hourly earnings															
Manufacturing	$2.35	$2.35	$2.34	$2.33	$2.32	$2.32	$2.32	$2.32	$2.30	$2.30	$2.30	$2.27	$2.29	$2.22	$2.13
Durable goods	2.51	2.51	2.50	2.49	2.48	2.47	2.48	2.48	2.46	2.46	2.46	2.43	2.45	2.38	2.28
Nondurable goods	2.14	2.14	2.13	2.13	2.12	2.11	2.12	2.11	2.10	2.09	2.09	2.07	2.08	2.01	1.94
Durable goods															
Ordnance and accessories	2.75	2.72	2.72	2.70	2.70	2.69	2.69	2.69	2.68	2.68	2.67	2.64	2.63	2.55	2.48
Lumber and wood products	2.09	2.09	2.08	2.06	2.00	1.98	2.00	2.01	2.01	2.06	2.11	2.07	2.07	1.97	1.89
Sawmills and planing mills	2.00	2.00	1.98	1.97	1.92	1.91	1.92	1.91	1.91	1.95	1.99	1.99	1.98	1.91	1.84
Millwork, plywood, and prefabricated structural wood products	2.14	2.13	2.13	2.13	2.09	2.08	2.09	2.08	2.06	2.08	2.09	2.10	2.12	2.05	1.96
Wooden containers	1.57	1.54	1.51	1.52	1.49	1.49	1.49	1.50	1.51	1.53	1.55	1.53	1.54	1.48	1.44
Miscellaneous wood products	1.71	1.72	1.71	1.70	1.68	1.68	1.67	1.68	1.69	1.70	1.70	1.69	1.69	1.62	1.58
Furniture and fixtures	1.87	1.88	1.87	1.87	1.87	1.86	1.86	1.88	1.87	1.87	1.87	1.86	1.86	1.82	1.78
Household furniture	1.76	1.77	1.76	1.77	1.75	1.75	1.75	1.77	1.76	1.76	1.76	1.75	1.75	1.73	1.69
Office, public-building, and professional furniture	2.14	2.13	2.13	2.13	2.14	2.13	2.13	2.15	2.14	2.16	2.15	2.13	2.13	2.08	2.02
Partitions, shelving, lockers, and fixtures	2.46	2.44	2.43	2.39	2.42	2.41	2.40	2.39	2.41	2.42	2.41	2.39	2.40	2.28	2.21
Screens, blinds, and miscellaneous furniture and fixtures	1.97	1.99	1.94	1.95	1.94	1.95	1.95	1.95	1.94	1.95	1.93	1.92	1.90	1.83	1.78

See footnotes at end of table.

TABLE C–1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961						1960							Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov	Oct.	Sept.	Aug.	July	1959	1958
Manufacturing—Continued															
Durable goods—Continued															
Average weekly earnings															
Stone, clay, and glass products	$96.17	$96.64	$94.83	$93.26	$92.86	$91.54	$91.54	$91.48	$94.02	$94.07	$92.75	$93.80	$93.02	$90.83	$84.80
Flat glass	125.33	126.25	124.19	118.49	121.99	121.99	124.03	130.29	135.79	133.66	126.54	125.42	124.26	113.46	113.10
Glass and glassware, pressed or blown	95.44	96.56	94.56	93.93	94.47	94.07	92.90	91.26	93.60	92.57	91.25	92.86	91.54	88.13	85.75
Glass products made of purchased glass	75.27	78.39	76.82	74.69	73.92	74.50	73.91	78.38	79.32	79.10	78.34	74.48	74.84	73.45	71.55
Cement, hydraulic	108.79	106.90	105.82	103.72	103.46	101.00	101.65	103.06	105.56	104.75	105.18	103.57	106.71	98.98	92.92
Structural clay products	85.07	85.70	84.25	83.02	80.99	79.17	79.97	79.56	81.60	82.01	81.60	83.64	82.22	80.39	75.25
Pottery and related products	84.26	84.58	84.58	82.88	82.94	81.31	79.79	80.14	83.76	83.76	80.41	83.28	79.21	79.80	73.24
Concrete, gypsum, and plaster products	100.33	99.67	96.77	95.85	93.66	91.24	91.94	90.61	93.50	95.91	95.48	96.36	95.26	91.96	86.43
Cut-stone and stone products	78.09	79.87	79.71	78.31	77.49	75.43	75.95	74.67	75.98	78.28	76.73	78.62	75.89	75.44	73.31
Miscellaneous nonmetallic mineral products	99.88	102.01	99.06	97.44	96.40	96.24	96.24	96.23	97.04	97.77	97.53	98.49	97.20	96.93	87.96
Primary metal industries	117.49	117.09	114.26	112.13	108.97	107.73	107.82	105.28	104.72	106.12	106.78	106.68	108.75	112.72	100.97
Blast furnaces, steel works, and rolling mills	126.72	126.01	122.29	120.02	115.44	113.77	114.25	109.34	106.86	109.63	110.60	110.53	113.83	122.28	108.00
Iron and steel foundries	101.89	101.49	99.71	96.26	94.63	93.25	92.62	94.12	94.13	95.76	95.76	95.98	97.61	97.44	85.93
Primary smelting and refining of nonferrous metals	112.61	111.52	108.95	108.68	107.87	109.89	109.75	110.43	110.83	110.29	111.51	110.43	109.74	105.93	99.05
Secondary smelting and refining of nonferrous metals	98.49	99.80	97.77	97.77	96.40	95.20	98.01	94.47	96.48	96.08	95.20	94.40	94.00	94.16	88.84
Rolling, drawing, and alloying of nonferrous metals	117.74	118.58	116.62	114.54	112.33	110.00	110.42	108.63	110.42	110.42	110.15	109.89	111.78	110.62	100.90
Nonferrous foundries	103.57	103.97	102.54	103.31	102.00	103.17	101.89	101.38	101.09	102.11	101.96	101.96	101.81	100.28	93.06
Miscellaneous primary metal industries	116.57	116.57	113.20	110.83	108.64	108.81	108.25	108.64	108.74	109.42	109.42	108.47	109.57	113.85	102.31
Average weekly hours															
Stone, clay, and glass products	41.1	41.3	40.7	40.2	40.2	39.8	39.8	39.6	40.7	40.9	40.5	41.0	40.8	41.1	40.0
Flat glass	40.3	39.7	39.3	38.1	39.1	39.1	39.5	41.1	42.7	41.9	40.2	40.2	39.7	41.6	38.6
Glass and glassware, pressed or blown	40.1	40.4	39.9	39.8	40.2	40.2	39.7	39.0	40.0	39.9	39.5	40.2	39.8	39.7	39.7
Glass products made of purchased glass	38.8	40.2	39.6	38.5	38.3	38.6	38.9	40.4	41.1	41.2	40.8	39.2	39.6	39.7	39.1
Cement, hydraulic	40.9	40.8	40.7	40.2	40.1	39.3	39.4	40.1	40.6	40.6	40.3	40.3	41.2	40.9	40.4
Structural clay products	40.9	41.2	40.9	40.3	39.7	39.0	39.2	39.0	40.0	40.2	40.0	41.0	40.5	40.6	39.4
Pottery and related products	38.3	38.1	38.1	37.5	37.7	37.3	36.6	37.1	38.6	38.6	37.4	38.2	36.5	38.0	35.9
Concrete, gypsum, and plaster products	44.2	44.1	43.2	42.6	42.0	41.1	41.6	41.0	42.5	43.4	43.4	44.0	44.1	44.0	43.0
Cut-stone and stone products	41.2	41.6	41.3	41.0	41.0	39.7	40.4	39.3	40.2	41.2	40.6	41.6	40.8	41.0	40.5
Miscellaneous nonmetallic mineral products	40.6	41.3	40.6	40.1	40.0	40.1	40.1	39.6	40.1	40.4	40.3	40.7	40.5	41.6	39.8
Primary metal industries	40.1	40.1	39.4	38.8	38.1	37.8	37.7	37.2	37.4	37.9	38.0	38.1	38.7	40.4	38.1
Blast furnaces, steel works, and rolling mills	39.6	39.5	38.7	38.1	37.0	36.7	36.5	35.5	35.5	36.3	36.5	36.6	37.2	39.7	37.5
Iron and steel foundries	39.8	39.8	39.1	38.2	37.7	37.3	36.9	37.2	37.5	38.0	38.0	38.7	39.2	40.1	37.2
Primary smelting and refining of nonferrous metals	41.1	41.0	40.5	40.4	40.4	40.7	40.8	40.9	41.2	41.0	41.3	40.9	41.1	40.9	40.1
Secondary smelting and refining of nonferrous metals	40.7	40.9	40.4	40.4	40.0	39.5	40.5	39.2	40.2	40.2	40.0	40.0	40.0	41.3	40.2
Rolling, drawing, and alloying of nonferrous metals	41.9	42.2	41.8	41.2	40.7	40.0	40.3	39.5	40.3	40.3	40.2	40.4	41.4	41.9	40.2
Nonferrous foundries	40.3	40.3	39.9	40.2	40.0	40.3	39.8	39.6	39.8	40.2	40.3	40.3	40.4	41.1	39.6
Miscellaneous primary metal industries	40.9	40.9	40.0	39.3	38.8	39.0	38.8	38.8	39.4	39.5	39.5	39.3	39.7	41.4	39.2
Average hourly earnings															
Stone, clay, and glass products	$2.34	$2.34	$2.33	$2.32	$2.31	$2.30	$2.30	$2.31	$2.31	$2.30	$2.29	$2.29	$2.28	$2.21	$2.12
Flat glass	3.11	3.18	3.16	3.11	3.12	3.12	3.14	3.17	3.18	3.19	3.14	3.12	3.13	3.16	2.93
Glass and glassware, pressed or blown	2.38	2.39	2.37	2.36	2.35	2.34	2.34	2.34	2.34	2.32	2.31	2.31	2.30	2.22	2.16
Glass products made of purchased glass	1.94	1.95	1.94	1.94	1.93	1.93	1.90	1.94	1.93	1.92	1.92	1.90	1.89	1.85	1.83
Cement, hydraulic	2.66	2.62	2.60	2.58	2.58	2.57	2.58	2.57	2.60	2.58	2.61	2.57	2.58	2.42	2.30
Structural clay products	2.08	2.08	2.06	2.06	2.04	2.03	2.04	2.04	2.04	2.04	2.04	2.04	2.03	1.98	1.91
Pottery and related products	2.20	2.22	2.22	2.21	2.20	2.18	2.18	2.16	2.17	2.17	2.15	2.18	2.17	2.10	2.04
Concrete, gypsum, and plaster products	2.27	2.26	2.24	2.25	2.23	2.22	2.21	2.21	2.20	2.21	2.20	2.19	2.16	2.09	2.01
Cut-stone and stone products	1.91	1.92	1.93	1.91	1.89	1.90	1.88	1.90	1.89	1.90	1.89	1.89	1.86	1.84	1.81
Miscellaneous nonmetallic mineral products	2.46	2.47	2.44	2.43	2.41	2.40	2.40	2.43	2.42	2.42	2.42	2.42	2.40	2.33	2.21
Primary metal industries	2.93	2.92	2.90	2.89	2.86	2.85	2.86	2.83	2.80	2.80	2.81	2.80	2.81	2.79	2.65
Blast furnaces, steel works, and rolling mills	3.20	3.19	3.16	3.15	3.12	3.10	3.13	3.08	3.01	3.02	3.03	3.02	3.06	3.08	2.88
Iron and steel foundries	2.56	2.55	2.55	2.52	2.51	2.50	2.51	2.53	2.51	2.52	2.52	2.48	2.49	2.43	2.31
Primary smelting and refining of nonferrous metals	2.74	2.72	2.69	2.69	2.67	2.70	2.69	2.70	2.69	2.69	2.70	2.70	2.67	2.59	2.47
Secondary smelting and refining of nonferrous metals	2.42	2.44	2.42	2.42	2.41	2.41	2.42	2.41	2.40	2.39	2.38	2.36	2.35	2.28	2.21
Rolling, drawing, and alloying of nonferrous metals	2.81	2.81	2.79	2.78	2.76	2.75	2.74	2.75	2.74	2.74	2.74	2.72	2.70	2.64	2.51
Nonferrous foundries	2.57	2.58	2.57	2.57	2.55	2.56	2.56	2.56	2.54	2.54	2.53	2.53	2.52	2.44	2.35
Miscellaneous primary metal industries	2.85	2.85	2.83	2.82	2.80	2.79	2.79	2.80	2.76	2.77	2.77	2.76	2.76	2.76	2.61

See footnotes at end of table.

TABLE C–1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961							1960						Annual average	
	July[2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
Manufacturing—Continued								**Average weekly earnings**							
Durable goods—Continued															
Fabricated metal products	$102.41	$103.16	$101.66	$99.60	$97.81	$96.82	$97.07	$98.58	$98.15	$100.04	$100.94	$100.45	$99.63	$97.41	$90.80
Tin cans and other tinware	128.77	126.58	121.25	118.24	114.90	115.87	116.72	114.45	114.90	114.09	115.79	119.26	119.94	112.36	104.42
Cutlery, handtools, and hardware	94.72	96.08	96.00	93.69	92.67	89.15	92.28	93.30	95.27	95.34	94.56	94.77	93.83	92.28	86.15
Heating apparatus (except electric) and plumbers' supplies	95.64	98.01	96.56	95.68	94.23	93.60	92.54	91.06	90.30	92.90	93.30	93.38	92.51	91.83	87.91
Fabricated structural metal products	102.72	103.07	101.40	100.65	100.15	99.40	99.60	99.10	100.94	101.68	102.18	101.84	102.26	96.72	93.43
Metal stamping, coating, and engraving	106.04	106.55	106.86	104.09	100.19	98.42	97.27	98.94	101.24	104.70	109.62	107.17	103.97	102.58	92.63
Lighting fixtures	92.10	93.73	91.08	87.55	85.57	86.33	86.71	86.41	89.04	94.48	93.79	89.24	87.02	87.72	80.17
Fabricated wire products	95.35	95.58	94.42	93.15	92.46	93.32	92.00	89.24	89.72	90.35	90.12	89.60	88.75	89.60	83.74
Miscellaneous fabricated metal products	99.88	101.11	98.98	96.47	95.83	94.47	94.47	93.99	95.82	96.48	94.64	95.91	95.20	97.44	88.53
Machinery (except electrical)	106.78	107.98	107.04	106.78	105.32	104.92	104.92	103.74	103.46	104.49	103.57	103.68	105.11	103.25	94.25
Engines and turbines	114.11	114.29	113.65	117.29	114.62	113.81	112.84	114.45	113.65	112.80	113.08	114.90	112.33	110.42	102.26
Agricultural machinery and tractors	105.30	106.79	107.33	108.81	107.19	108.00	106.13	106.27	104.94	104.80	104.66	104.12	102.43	104.09	95.59
Construction and mining machinery	107.42	105.56	106.86	105.15	102.17	101.77	101.12	101.77	101.24	101.49	100.86	100.84	102.00	101.35	91.89
Metalworking machinery	114.54	117.03	116.47	116.47	114.93	113.96	112.61	111.23	109.62	111.25	109.62	110.84	118.30	114.06	101.38
Special-industry machinery (except metalworking machinery)	102.59	102.92	101.68	101.02	99.88	100.61	100.12	100.21	100.53	101.50	101.02	101.46	102.37	98.05	89.55
General industrial machinery	105.26	106.55	105.11	103.68	102.66	102.51	102.11	100.98	102.11	102.87	102.72	103.22	102.66	100.94	93.06
Office and store machines and devices	111.49	110.27	107.86	107.18	106.52	106.63	106.37	104.66	105.97	106.60	105.30	101.63	105.88	98.89	93.30
Service-industry and household machines	102.51	102.36	102.36	101.45	100.19	98.78	100.84	99.54	98.50	98.70	98.46	96.87	96.62	97.20	90.68
Miscellaneous machinery parts	103.83	105.52	103.57	103.17	101.75	101.75	102.26	99.96	100.69	101.85	101.20	100.65	100.25	101.43	92.73
								Average weekly hours							
Fabricated metal products	40.8	41.1	40.5	40.0	39.6	39.2	39.3	39.1	39.9	40.5	40.7	41.0	40.5	41.1	40.0
Tin cans and other tinware	44.1	43.8	42.1	41.2	40.6	40.8	41.1	40.3	40.6	40.6	41.8	42.9	43.3	42.4	41.6
Cutlery, handtools, and hardware	39.8	40.2	40.0	39.7	39.1	38.1	39.1	39.2	40.2	40.4	39.9	40.5	40.1	41.0	39.7
Heating apparatus (except electric) and plumbers' supplies	40.1	40.5	39.9	39.7	39.1	39.0	38.4	38.1	38.1	39.2	39.2	39.4	39.2	40.1	39.6
Fabricated structural metal products	40.6	40.9	40.4	40.1	39.9	39.6	40.0	39.8	40.7	41.0	41.2	41.4	41.4	40.3	40.1
Metal stamping, coating, and engraving	41.1	41.3	41.1	40.5	39.6	38.9	38.6	38.8	39.7	40.9	42.0	41.7	40.3	41.7	40.1
Lighting fixtures	39.7	40.4	39.6	38.4	38.2	38.2	38.2	37.9	39.4	40.9	40.6	40.2	39.2	40.8	39.3
Fabricated wire products	41.1	41.2	40.7	40.5	40.2	40.4	40.0	38.8	39.7	39.8	39.7	40.0	39.8	41.1	39.5
Miscellaneous fabricated metal products	40.6	41.1	40.4	39.7	39.6	39.2	39.2	39.0	39.8	40.2	39.6	40.3	40.0	42.0	39.7
Machinery (except electrical)	40.6	40.9	40.7	40.6	40.2	40.2	40.2	39.9	40.1	40.5	40.3	40.5	40.9	41.3	39.6
Engines and turbines	39.9	40.1	40.3	41.3	40.5	40.5	40.3	40.3	40.3	40.0	40.1	40.6	40.7	41.2	40.1
Agricultural machinery and tractors	39.0	39.7	39.9	40.3	39.7	40.0	39.6	39.8	39.6	40.0	40.1	40.2	39.7	40.5	39.5
Construction and mining machinery	41.0	40.6	41.1	40.6	39.6	39.6	39.5	39.6	39.7	39.8	39.4	39.7	40.0	41.2	39.1
Metalworking machinery	41.2	41.5	41.3	41.3	40.9	40.7	40.8	40.3	40.3	40.9	40.6	40.9	42.4	42.4	39.6
Special-industry machinery (except metalworking machinery)	41.2	41.5	41.0	40.9	40.6	40.9	40.7	40.9	41.2	41.6	41.4	42.1	42.3	41.9	39.8
General industrial machinery	40.8	41.3	40.9	40.5	40.1	40.2	40.2	39.6	40.2	40.5	40.6	40.8	40.9	41.2	39.6
Office and store machines and devices	41.6	41.3	40.7	40.6	40.5	40.7	40.6	40.1	40.6	41.0	40.5	39.7	41.2	40.2	39.7
Service-industry and household machines	40.2	40.3	40.3	40.1	39.6	39.2	39.7	39.5	39.4	39.8	39.7	39.7	39.6	40.5	39.6
Miscellaneous machinery parts	40.4	40.9	40.3	40.3	39.9	39.9	40.1	39.2	39.8	40.1	40.0	40.1	40.1	41.4	39.8
								Average hourly earnings							
Fabricated metal products	$2.51	$2.51	$2.51	$2.49	$2.47	$2.47	$2.47	$2.47	$2.46	$2.47	$2.48	$2.45	$2.46	$2.37	$2.27
Tin cans and other tinware	2.92	2.89	2.88	2.87	2.83	2.84	2.84	2.84	2.83	2.81	2.77	2.78	2.77	2.65	2.51
Cutlery, handtools, and hardware	2.38	2.39	2.40	2.36	2.37	2.34	2.36	2.38	2.37	2.36	2.37	2.34	2.34	2.25	2.17
Heating apparatus (except electric) and plumbers' supplies	2.41	2.42	2.42	2.41	2.41	2.40	2.41	2.39	2.37	2.37	2.38	2.37	2.36	2.29	2.22
Fabricated structural metal products	2.53	2.52	2.51	2.51	2.51	2.51	2.49	2.49	2.48	2.48	2.48	2.46	2.47	2.40	2.33
Metal stamping, coating, and engraving	2.58	2.58	2.60	2.57	2.53	2.53	2.52	2.55	2.55	2.56	2.61	2.57	2.58	2.46	2.31
Lighting fixtures	2.32	2.32	2.30	2.28	2.24	2.26	2.27	2.28	2.26	2.31	2.31	2.22	2.22	2.15	2.04
Fabricated wire products	2.32	2.32	2.32	2.30	2.30	2.31	2.30	2.30	2.26	2.27	2.27	2.24	2.23	2.18	2.12
Miscellaneous fabricated metal products	2.46	2.46	2.45	2.43	2.42	2.41	2.41	2.41	2.40	2.40	2.39	2.38	2.38	2.32	2.23
Machinery (except electrical)	2.63	2.64	2.63	2.63	2.62	2.61	2.61	2.60	2.58	2.58	2.57	2.56	2.57	2.50	2.38
Engines and turbines	2.86	2.85	2.82	2.84	2.83	2.81	2.80	2.84	2.82	2.82	2.82	2.83	2.76	2.68	2.55
Agricultural machinery and tractors	2.70	2.69	2.69	2.70	2.70	2.70	2.68	2.67	2.65	2.62	2.61	2.59	2.58	2.57	2.42
Construction and mining machinery	2.62	2.60	2.60	2.59	2.58	2.57	2.56	2.57	2.55	2.55	2.56	2.54	2.55	2.46	2.38
Metalworking machinery	2.78	2.82	2.82	2.82	2.81	2.80	2.76	2.76	2.72	2.72	2.70	2.71	2.79	2.60	2.56
Special-industry machinery (except metalworking machinery)	2.49	2.48	2.48	2.47	2.46	2.46	2.46	2.45	2.44	2.44	2.44	2.41	2.42	2.34	2.25
General industrial machinery	2.58	2.58	2.57	2.56	2.56	2.55	2.54	2.55	2.54	2.54	2.53	2.52	2.51	2.45	2.35
Office and store machines and devices	2.68	2.67	2.65	2.64	2.63	2.62	2.62	2.61	2.61	2.60	2.60	2.56	2.57	2.46	2.35
Service-industry and household machines	2.55	2.54	2.54	2.53	2.53	2.52	2.54	2.52	2.50	2.48	2.48	2.44	2.44	2.40	2.29
Miscellaneous machinery parts	2.57	2.58	2.57	2.56	2.55	2.55	2.55	2.55	2.53	2.54	2.53	2.51	2.50	2.45	2.33

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961							1960						Annual average	
	July[2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1960	1958
Manufacturing—Continued								**Average weekly earnings**							
Durable goods—Continued															
Electrical machinery	$94.96	$95.91	$94.40	$94.16	$93.30	$93.77	$93.77	$92.28	$93.20	$93.09	$93.03	$91.77	$90.39	$89.91	$85.14
Electrical generating, transmission, distribution, and industrial apparatus	99.85	100.19	99.05	99.05	98.15	98.00	97.91	97.57	97.11	96.16	96.80	96.80	96.80	94.19	89.72
Electrical appliances	95.68	94.32	95.28	96.40	95.44	94.38	93.56	89.68	90.48	92.00	89.93	90.00	90.62	89.27	85.36
Insulated wire and cable	93.74	93.31	89.88	88.82	87.34	87.57	88.19	85.50	87.76	89.21	87.76	88.20	88.40	87.15	86.11
Electrical equipment for vehicles	107.42	107.27	103.83	99.57	99.18	94.75	96.64	98.94	98.53	101.85	102.77	95.59	98.21	96.56	89.47
Electric lamps	90.09	90.62	89.93	90.85	89.70	89.93	86.33	81.98	89.67	89.65	86.08	87.47	85.25	88.13	80.87
Communication equipment	90.23	92.46	90.74	90.52	90.68	91.20	91.43	89.54	90.45	90.94	90.05	88.80	85.69	86.86	81.97
Miscellaneous electrical products	91.03	90.23	90.40	89.33	88.26	92.52	94.54	91.20	90.72	90.58	89.60	89.82	89.15	88.94	85.03
Transportation equipment	113.93	113.81	113.40	111.88	109.69	109.25	108.14	111.44	112.16	115.49	112.96	108.90	110.15	107.73	100.69
Motor vehicles and equipment	115.54	116.28	115.71	111.95	107.80	105.56	104.81	111.79	113.77	119.39	116.52	108.64	111.20	110.16	99.96
Aircraft and parts	112.33	111.65	112.20	112.75	113.99	114.82	114.13	113.44	112.61	111.93	111.24	110.84	110.97	106.63	101.91
Ship and boat building and repairing	113.03	110.43	111.60	110.80	108.47	108.98	108.31	106.12	105.98	109.53	103.97	108.23	106.90	101.40	98.00
Railroad equipment	110.30	109.91	108.59	105.08	107.26	103.49	106.02	106.39	103.58	108.67	106.96	107.24	107.90	107.41	100.70
Other transportation equipment	87.58	90.90	88.43	92.06	91.88	90.00	87.94	88.09	86.94	88.46	86.75	83.63	84.80	89.13	82.74
								Average weekly hours							
Electrical machinery	39.9	40.3	40.9	39.9	39.7	39.9	39.9	39.1	40.0	40.3	40.1	39.9	39.3	40.5	39.5
Electrical generating, transmission, distribution, and industrial apparatus	40.1	40.4	40.1	40.1	39.9	40.0	39.8	39.5	39.8	39.9	40.0	40.0	40.0	40.6	39.7
Electrical appliances	39.7	39.3	39.7	40.0	39.6	39.0	38.5	38.0	39.0	40.0	39.1	39.3	39.4	39.5	38.8
Insulated wire and cable	43.0	43.2	42.0	42.1	41.2	41.5	41.6	39.4	41.2	41.3	41.2	41.8	41.5	41.9	41.4
Electrical equipment for vehicles	41.0	41.1	40.4	39.2	39.2	37.9	38.5	38.8	39.1	40.1	40.3	38.7	39.6	40.4	38.9
Electric lamps	39.0	39.4	39.1	39.5	39.0	39.1	37.7	35.8	39.5	40.2	38.6	39.4	38.4	40.8	39.3
Communication equipment	39.4	40.2	39.8	39.7	39.6	40.0	40.1	39.1	40.2	40.6	40.2	40.0	38.6	40.4	39.6
Miscellaneous electrical products	40.1	40.1	49.0	39.7	39.4	40.4	40.4	40.0	40.5	40.8	40.0	40.1	39.8	40.8	40.3
Transportation equipment	40.4	40.5	40.5	40.1	39.6	39.3	38.9	39.8	40.2	41.1	40.2	39.6	40.2	40.5	39.8
Motor vehicles and equipment	40.4	40.8	40.6	39.7	38.5	37.7	37.3	39.5	40.2	41.6	40.6	38.8	40.0	40.8	39.2
Aircraft and parts	40.7	40.6	40.8	41.0	41.3	41.6	41.5	41.1	41.1	41.0	40.6	40.9	41.1	40.7	40.6
Ship and boat building and repairing	39.8	39.3	40.0	40.0	39.3	39.2	39.1	37.9	38.4	39.4	37.4	39.5	39.3	39.0	39.2
Railroad equipment	38.7	38.7	38.1	37.0	37.9	36.7	37.2	37.2	36.6	38.4	38.2	38.3	38.4	39.2	38.0
Other transportation equipment	39.1	40.4	39.3	40.2	40.3	39.3	38.4	38.3	38.3	38.8	38.9	37.5	38.2	40.7	39.4
								Average hourly earnings							
Electrical machinery	$2.38	$2.38	$2.36	$2.36	$2.35	$2.35	$2.35	$2.36	$2.33	$2.31	$2.32	$2.30	$2.30	$2.22	$2.15
Electrical generating, transmission, distribution, and industrial apparatus	2.49	2.48	2.47	2.47	2.46	2.45	2.46	2.47	2.44	2.41	2.42	2.42	2.42	2.32	2.26
Electrical appliances	2.41	2.40	2.40	2.41	2.41	2.42	2.43	2.36	2.32	2.30	2.30	2.29	2.30	2.26	2.20
Insulated wire and cable	2.18	2.16	2.14	2.11	2.12	2.11	2.12	2.17	2.13	2.16	2.13	2.11	2.13	2.08	2.08
Electrical equipment for vehicles	2.62	2.61	2.57	2.54	2.53	2.50	2.51	2.55	2.52	2.54	2.55	2.47	2.48	2.39	2.30
Electric lamps	2.31	2.30	2.30	2.30	2.30	2.30	2.29	2.29	2.27	2.23	2.23	2.22	2.22	2.16	2.06
Communication equipment	2.29	2.30	2.28	2.28	2.29	2.28	2.28	2.29	2.25	2.24	2.24	2.22	2.22	2.15	2.07
Miscellaneous electrical products	2.27	2.25	2.26	2.25	2.24	2.29	2.34	2.28	2.24	2.22	2.24	2.24	2.24	2.18	2.11
Transportation equipment	2.82	2.81	2.80	2.79	2.77	2.78	2.78	2.80	2.79	2.81	2.81	2.75	2.74	2.66	2.43
Motor vehicles and equipment	2.86	2.85	2.85	2.82	2.80	2.80	2.81	2.83	2.83	2.87	2.87	2.80	2.78	2.70	2.54
Aircraft and parts	2.76	2.75	2.75	2.75	2.76	2.76	2.75	2.76	2.74	2.73	2.74	2.71	2.70	2.62	2.51
Ship and boat building and repairing	2.84	2.81	2.79	2.77	2.76	2.78	2.77	2.80	2.76	2.78	2.78	2.74	2.72	2.60	2.40
Railroad equipment	2.85	2.84	2.85	2.84	2.83	2.82	2.85	2.86	2.83	2.83	2.80	2.80	2.81	2.74	2.65
Other transportation equipment	2.24	2.25	2.25	2.29	2.28	2.29	2.29	2.30	2.27	2.28	2.23	2.23	2.22	2.19	2.10

See footnotes at end of table.

TABLE C–1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
Manufacturing—Continued	Average weekly earnings														
Durable goods—Continued															
Instruments and related products	$97.77	$98.66	$97.53	$97.28	$97.53	$96.64	$96.88	$94.47	$96.63	$95.99	$95.44	$95.99	$95.75	$93.25	$87.38
Laboratory, scientific, and engineering instruments	114.86	117.16	114.77	114.90	117.01	114.62	119.14	113.83	116.34	116.34	115.51	115.79	115.37	111.14	103.07
Mechanical measuring and controlling instruments	97.27	98.33	96.08	96.48	96.08	94.80	94.24	91.80	94.71	92.97	92.04	91.87	92.57	92.62	86.72
Optical instruments and lenses	104.33	101.02	99.47	98.82	98.33	97.09	99.72	100.12	101.09	98.81	98.88	97.17	98.77	92.25	88.51
Surgical, medical, and dental instruments	85.44	84.63	84.42	83.60	83.81	85.06	84.02	80.85	85.88	86.51	85.68	85.06	85.48	82.82	78.00
Ophthalmic goods	85.20	85.86	83.62	82.61	81.39	79.56	77.95	77.32	78.16	77.81	77.95	79.80	78.78	77.59	71.41
Photographic apparatus	111.92	111.92	110.57	110.03	109.48	109.76	109.89	110.29	109.89	109.33	108.14	110.27	108.94	104.65	97.53
Watches and clocks	75.55	76.94	79.37	78.56	80.57	79.18	76.96	73.46	76.24	77.42	76.43	80.00	79.00	77.41	73.71
Miscellaneous manufacturing industries	78.80	79.80	79.00	78.61	78.61	78.80	78.41	76.03	78.40	78.20	77.03	77.60	76.44	76.57	73.26
Jewelry, silverware, and plated ware	79.40	81.81	80.20	79.40	78.40	78.21	78.41	75.83	84.00	82.37	76.03	79.77	77.22	79.46	75.70
Musical instruments and parts	87.64	89.78	88.14	89.50	89.78	90.09	91.35	91.94	94.24	95.34	93.56	90.58	88.66	88.99	83.79
Toys and sporting goods	71.05	72.15	72.93	73.51	75.06	75.65	75.46	69.56	72.13	71.28	71.13	70.59	68.20	69.17	66.91
Pens, pencils, other office supplies	69.84	72.22	72.04	72.10	71.31	71.50	67.89	68.56	71.10	72.80	71.94	72.00	66.06	70.58	67.72
Costume jewelry, buttons, notions	70.92	73.57	73.23	71.37	69.84	70.20	70.23	67.15	71.10	70.71	65.82	68.56	67.64	68.90	65.18
Fabricated plastics products	87.14	88.20	86.52	84.66	84.03	83.42	83.01	80.91	83.23	83.44	84.05	83.64	84.05	83.20	79.17
Other manufacturing industries	81.58	82.39	80.55	80.96	81.37	81.97	81.37	79.54	80.19	80.19	80.40	80.60	80.79	79.40	76.04
	Average weekly hours														
Instruments and related products	40.4	40.6	40.3	40.2	40.3	40.1	40.2	39.2	40.6	40.5	40.1	40.5	40.4	40.9	39.9
Laboratory, scientific, and engineering instruments	40.3	41.4	40.7	40.6	41.2	40.5	42.1	39.8	42.0	41.7	41.4	41.8	41.5	42.1	40.9
Mechanical measuring and controlling instruments	40.7	40.8	40.2	40.2	40.2	40.0	40.1	38.9	40.3	39.9	39.5	39.6	39.9	40.8	39.6
Optical instruments and lenses	41.9	40.9	40.6	40.5	40.3	40.2	40.7	41.2	41.6	41.0	41.2	41.0	41.5	41.0	40.6
Surgical, medical, and dental instruments	40.3	40.3	40.2	40.0	40.1	40.7	40.2	38.5	40.7	41.0	40.8	40.7	40.9	40.6	40.0
Ophthalmic goods	40.0	40.5	40.2	40.1	39.7	39.0	38.4	37.9	38.5	39.1	38.4	39.7	39.0	40.2	38.6
Photographic apparatus	41.3	41.3	40.8	40.6	40.4	40.5	40.4	41.0	41.2	41.1	40.5	41.3	40.8	41.2	40.3
Watches and clocks	37.4	37.9	39.1	38.7	39.3	39.2	38.1	37.1	38.9	39.7	38.6	40.2	39.7	39.9	39.0
Miscellaneous manufacturing industries	39.6	40.1	39.7	39.5	39.5	39.6	39.4	38.4	40.0	40.1	39.5	40.0	39.4	40.3	39.6
Jewelry, silverware, and plated ware	39.9	40.7	39.9	39.5	39.2	39.5	39.8	38.3	42.0	41.6	38.4	40.7	39.6	41.6	40.7
Musical instruments and parts	39.3	39.9	39.0	39.6	39.9	40.4	40.6	40.5	41.7	42.0	41.4	40.8	40.3	41.2	39.9
Toys and sporting goods	38.2	39.0	39.0	39.1	39.3	39.4	39.3	37.4	39.2	39.6	39.3	39.0	38.1	39.3	38.9
Pens, pencils, other office supplies	38.8	39.9	39.8	39.4	39.4	39.5	37.3	38.3	39.5	40.0	39.1	40.0	36.7	40.1	39.6
Costume jewelry, buttons, notions	39.4	40.2	39.8	39.0	38.8	39.0	38.8	37.1	39.5	39.5	37.4	39.4	39.1	39.6	38.8
Fabricated plastics products	41.3	41.8	41.2	40.7	40.4	40.3	40.1	38.9	40.6	40.7	41.0	41.0	40.8	41.6	40.6
Other manufacturing industries	39.6	39.8	39.1	39.3	39.5	39.6	39.5	38.8	39.5	39.7	39.8	39.9	39.8	40.1	39.4
	Average hourly earnings														
Instruments and related products	$2.42	$2.43	$2.42	$2.42	$2.42	$2.41	$2.41	$2.41	$2.38	$2.37	$2.38	$2.37	$2.37	$2.28	$2.19
Laboratory, scientific, and engineering instruments	2.85	2.83	2.82	2.83	2.84	2.83	2.83	2.86	2.77	2.79	2.79	2.77	2.78	2.64	2.52
Mechanical measuring and controlling instruments	2.39	2.41	2.39	2.40	2.39	2.37	2.35	2.36	2.35	2.33	2.33	2.32	2.32	2.27	2.19
Optical instruments and lenses	2.49	2.47	2.45	2.44	2.44	2.43	2.45	2.43	2.43	2.41	2.40	2.37	2.38	2.25	2.18
Surgical, medical, and dental instruments	2.12	2.10	2.10	2.09	2.09	2.09	2.09	2.10	2.11	2.11	2.10	2.09	2.09	2.04	1.95
Ophthalmic goods	2.13	2.12	2.08	2.06	2.05	2.04	2.03	2.04	2.03	1.99	2.03	2.01	2.02	1.93	1.85
Photographic apparatus	2.71	2.71	2.71	2.71	2.71	2.71	2.72	2.69	2.66	2.66	2.67	2.67	2.67	2.54	2.42
Watches and clocks	2.02	2.03	2.03	2.03	2.05	2.02	2.02	1.98	1.96	1.95	1.98	1.99	1.99	1.94	1.89
Miscellaneous manufacturing industries	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.98	1.96	1.95	1.95	1.94	1.94	1.90	1.85
Jewelry, silverware, and plated ware	1.99	2.01	2.01	2.01	2.00	1.98	1.97	1.98	2.00	1.98	1.98	1.96	1.95	1.91	1.86
Musical instruments and parts	2.23	2.25	2.26	2.26	2.25	2.23	2.22	2.27	2.26	2.27	2.26	2.22	2.20	2.16	2.10
Toys and sporting goods	1.86	1.85	1.87	1.88	1.91	1.92	1.92	1.86	1.84	1.80	1.81	1.81	1.79	1.76	1.72
Pens, pencils, other office supplies	1.80	1.81	1.81	1.83	1.81	1.81	1.82	1.79	1.80	1.82	1.84	1.80	1.80	1.76	1.71
Costume jewelry, buttons, notions	1.80	1.83	1.84	1.83	1.80	1.80	1.81	1.81	1.80	1.79	1.76	1.74	1.73	1.74	1.68
Fabricated plastics products	2.11	2.11	2.10	2.08	2.08	2.07	2.07	2.08	2.05	2.05	2.05	2.04	2.06	2.00	1.95
Other manufacturing industries	2.06	2.07	2.06	2.06	2.06	2.07	2.06	2.05	2.03	2.02	2.02	2.02	2.03	1.98	1.93

See footnotes at end of table.

TABLE C–1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
	Average weekly earnings														
Manufacturing—Continued															
Nondurable goods															
Food and kindred products	$92.48	$92.48	$92.21	$89.95	$90.17	$89.78	$90.45	$89.24	$89.10	$88.97	$89.02	$88.58	$89.60	$85.68	$81.61
Meat products	103.17	103.91	102.84	99.54	100.25	99.29	101.56	101.59	102.18	101.11	102.51	99.70	100.94	97.23	91.08
Dairy products	94.15	93.51	91.54	89.79	90.01	90.01	90.01	88.94	89.40	89.40	91.76	90.30	91.79	86.32	81.90
Canning and preserving	70.86	72.00	74.09	70.66	69.94	69.93	68.82	67.71	64.79	72.00	74.69	74.03	70.71	67.64	66.13
Grain-mill products	102.14	100.34	97.20	97.61	97.41	97.65	100.57	99.21	99.44	101.93	99.46	98.35	99.01	92.66	89.79
Bakery products	93.02	93.43	91.53	89.15	89.15	90.23	88.31	88.53	89.91	89.51	89.06	88.48	89.16	83.21	79.00
Sugar	107.35	101.68	104.50	99.14	102.09	103.09	103.26	102.91	102.11	92.64	98.25	96.96	101.92	93.10	89.73
Confectionery and related products	75.45	76.38	76.19	74.82	73.45	73.05	73.42	69.30	70.88	72.85	74.66	73.12	72.10	68.90	66.30
Beverages	108.94	104.45	101.45	101.09	99.94	96.86	97.36	97.61	99.75	99.20	99.29	100.53	102.42	96.80	92.23
Miscellaneous food products	91.36	89.02	88.99	87.67	89.60	90.47	89.79	88.10	90.07	89.67	89.02	86.93	86.74	84.65	80.95
Tobacco manufactures	72.19	75.43	72.20	72.19	66.43	66.59	66.53	69.95	65.60	65.21	63.27	64.81	68.43	65.40	62.56
Cigarettes	84.07	90.03	85.46	86.33	79.08	80.77	80.81	86.69	83.07	82.32	78.58	79.13	80.88	81.80	77.55
Cigars	55.33	56.54	54.76	53.44	52.27	52.56	54.31	54.68	58.26	56.79	55.01	54.72	53.58	53.02	51.79
Tobacco and snuff	71.06	71.06	70.30	72.20	70.12	69.38	70.68	72.52	67.90	70.49	69.19	70.47	67.52	66.82	62.79
Tobacco stemming and redrying	59.90	64.77	64.68	63.74	54.75	53.44	54.29	57.92	45.14	53.26	53.97	49.87	59.93	52.40	49.92
	Average weekly hours														
Food and kindred products	41.1	41.1	40.8	39.8	39.9	39.9	40.2	40.2	40.5	41.0	41.6	41.2	41.1	40.8	40.7
Meat products	41.6	41.9	41.3	40.3	40.1	39.4	40.3	40.8	41.2	41.1	41.5	41.2	41.2	41.2	40.2
Dairy products	42.6	42.7	41.8	41.0	41.1	41.1	41.1	40.8	41.2	41.2	41.9	42.0	42.3	41.7	42.0
Canning and preserving	38.3	38.5	39.2	36.8	37.2	37.8	37.4	36.8	36.4	40.0	42.2	40.9	39.5	39.1	39.6
Grain-mill products	44.8	44.4	43.2	43.0	43.1	43.4	44.5	43.9	44.0	45.1	44.8	44.5	44.8	43.5	43.8
Bakery products	40.8	40.8	40.5	39.8	39.8	40.1	39.6	39.7	40.5	40.5	40.3	40.4	40.9	40.2	40.1
Sugar	42.6	41.0	41.8	40.8	41.5	42.6	44.7	51.2	50.8	42.3	40.6	40.4	41.6	43.3	44.2
Confectionery and related products	39.5	40.2	40.1	39.8	39.7	39.7	39.9	38.5	39.6	40.7	40.8	40.4	39.4	39.6	39.7
Beverages	41.9	40.8	40.1	39.8	39.5	38.9	39.1	39.2	39.9	40.0	40.2	40.7	41.3	40.5	40.1
Miscellaneous food products	42.1	41.6	41.2	40.4	41.1	41.5	41.0	40.6	41.7	41.9	41.6	41.2	41.5	41.7	41.3
Tobacco manufactures	38.4	39.7	38.2	38.4	36.7	37.2	37.8	39.3	37.7	40.5	40.3	37.9	37.6	39.4	39.1
Cigarettes	39.1	41.3	39.2	39.6	37.3	38.1	38.3	40.7	39.0	39.2	37.6	38.6	38.7	40.9	40.6
Cigars	37.9	38.2	37.0	36.6	35.8	36.0	37.2	37.2	39.1	38.9	38.2	38.0	36.7	37.6	37.8
Tobacco and snuff	37.8	37.6	37.0	37.8	37.3	37.5	38.0	39.2	36.7	37.9	37.4	38.3	37.1	38.4	37.6
Tobacco stemming and redrying	36.3	38.1	38.5	38.4	36.5	36.6	37.7	39.4	34.2	43.3	44.6	36.4	36.1	39.4	38.7
	Average hourly earnings														
Food and kindred products	$2.25	$2.25	$2.26	$2.26	$2.26	$2.25	$2.25	$2.22	$2.20	$2.17	$2.14	$2.15	$2.18	$2.10	$2.01
Meat products	2.48	2.48	2.49	2.47	2.50	2.52	2.52	2.49	2.48	2.46	2.47	2.42	2.45	2.36	2.26
Dairy products	2.21	2.19	2.19	2.19	2.19	2.19	2.19	2.18	2.17	2.17	2.19	2.15	2.17	2.07	1.95
Canning and preserving	1.85	1.87	1.89	1.92	1.88	1.85	1.84	1.84	1.78	1.80	1.77	1.81	1.79	1.73	1.67
Grain-mill products	2.28	2.26	2.25	2.27	2.26	2.25	2.26	2.26	2.26	2.26	2.22	2.21	2.21	2.13	2.05
Bakery products	2.28	2.29	2.26	2.24	2.24	2.25	2.23	2.23	2.22	2.21	2.21	2.19	2.18	2.07	1.97
Sugar	2.52	2.48	2.50	2.43	2.46	2.42	2.31	2.01	2.01	2.19	2.42	2.40	2.45	2.15	2.03
Confectionery and related products	1.91	1.90	1.90	1.88	1.85	1.84	1.84	1.80	1.79	1.79	1.83	1.81	1.83	1.74	1.67
Beverages	2.60	2.56	2.53	2.54	2.53	2.49	2.49	2.49	2.50	2.48	2.47	2.47	2.48	2.39	2.30
Miscellaneous food products	2.17	2.14	2.16	2.17	2.18	2.18	2.19	2.17	2.16	2.14	2.14	2.11	2.09	2.03	1.96
Tobacco manufactures	1.88	1.90	1.89	1.88	1.81	1.79	1.76	1.78	1.74	1.61	1.67	1.71	1.82	1.66	1.60
Cigarettes	2.15	2.18	2.18	2.18	2.12	2.12	2.11	2.13	2.13	2.10	2.09	2.05	2.09	2.00	1.91
Cigars	1.46	1.48	1.48	1.46	1.46	1.46	1.46	1.47	1.49	1.46	1.44	1.44	1.46	1.41	1.37
Tobacco and snuff	1.88	1.89	1.90	1.91	1.88	1.85	1.86	1.85	1.85	1.86	1.85	1.84	1.82	1.74	1.67
Tobacco stemming and redrying	1.65	1.70	1.68	1.66	1.50	1.46	1.44	1.47	1.32	1.23	1.21	1.37	1.66	1.33	1.29

See footnotes at end of table.

TABLE C–1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
Manufacturing—Continued															
Nondurable goods—Continued															
	Average weekly earnings														
Textile-mill products	$65.44	$65.93	$64.78	$63.96	$63.24	$62.76	$61.86	$61.88	$63.18	$63.24	$62.05	$64.31	$64.31	$63.43	$58.29
Scouring and combing plants	74.20	77.26	75.78	74.87	72.10	70.18	71.28	66.95	66.78	67.82	67.25	72.45	75.50	72.16	64.96
Yarn and thread mills	60.89	61.35	60.28	59.06	57.53	56.70	55.12	56.10	57.53	56.63	56.02	58.29	58.98	58.95	52.36
Broad-woven fabric mills	64.88	64.88	64.08	63.04	62.40	61.69	61.53	62.17	62.55	62.88	61.92	64.88	65.37	63.29	56.26
Narrow fabrics and smallwares	67.83	68.45	67.26	66.86	66.07	65.90	64.24	63.46	65.07	64.51	64.18	66.80	65.57	65.53	60.37
Knitting mills	59.06	59.60	58.37	57.13	57.29	56.76	54.57	54.57	57.38	57.99	57.15	58.29	57.60	57.51	54.78
Dyeing and finishing textiles	73.75	76.59	74.82	74.11	73.57	74.52	69.92	69.70	71.86	71.20	67.94	70.58	70.62	71.48	66.53
Carpets, rugs, other floor coverings	80.77	83.78	80.99	80.39	78.59	78.59	78.20	78.40	79.56	79.97	79.17	80.75	79.59	81.51	77.30
Hats (except cloth and millinery)	64.60	66.70	64.53	63.41	59.62	61.01	62.39	57.80	61.32	59.07	57.59	60.80	57.95	61.71	58.74
Miscellaneous textile goods	77.78	79.54	77.18	76.59	75.62	73.70	75.03	73.91	75.62	76.78	75.64	75.58	75.41	73.71	68.95
Apparel and other finished textile products	57.72	56.41	55.62	56.29	57.12	55.81	54.70	52.44	55.77	56.45	55.93	57.62	56.42	55.63	53.45
Men's and boys' suits and coats	68.80	67.97	67.55	65.36	65.39	66.34	66.91	62.75	67.26	69.52	69.72	72.38	70.67	65.47	60.37
Men's and boys' furnishings and work clothing	49.21	48.31	47.39	46.95	47.57	46.90	46.10	45.28	46.42	47.75	48.55	49.37	49.24	48.76	46.08
Women's outerwear	62.63	58.28	57.93	61.41	62.12	59.31	56.70	53.62	58.45	57.85	57.70	61.08	58.65	59.51	57.63
Women's, children's undergarments	52.48	52.42	52.20	52.78	53.00	51.77	51.48	49.39	52.99	53.65	52.05	52.11	50.26	51.29	49.89
Millinery	73.22	64.26	54.72	61.52	70.85	74.84	63.03	53.94	58.74	69.52	67.04	69.48	67.03	62.93	54.05
Children's outerwear	54.46	54.02	51.98	50.11	52.27	53.73	52.41	46.48	50.84	51.84	50.22	53.42	53.28	51.10	50.23
Miscellaneous apparel and accessories	53.07	53.80	53.13	53.13	53.58	52.27	52.54	50.27	52.33	55.20	53.13	53.95	52.85	52.54	50.76
Other fabricated textile products	64.73	65.45	64.05	65.23	64.63	62.79	62.36	62.53	67.03	66.30	63.08	61.56	63.79	59.59	58.85
	Average weekly hours														
Textile-mill products	39.9	40.2	39.5	39.0	38.8	38.5	38.0	38.2	39.0	38.8	38.3	39.7	39.7	40.4	38.6
Scouring and combing plants	42.4	43.9	43.3	42.3	41.2	40.1	40.5	38.7	38.6	39.2	39.1	41.4	42.9	42.2	40.6
Yarn and thread mills	39.8	40.1	39.4	38.6	38.1	37.3	36.5	37.4	38.1	37.5	37.1	38.6	38.8	40.1	37.4
Broad-woven fabric mills	40.3	40.3	39.8	39.4	39.0	38.8	38.7	39.1	39.4	39.3	38.7	40.3	40.6	41.1	38.8
Narrow fabrics and smallwares	39.9	40.5	39.8	39.8	39.8	39.7	38.7	38.0	38.5	38.4	38.2	40.0	39.5	40.7	39.2
Knitting mills	38.6	38.7	37.9	37.1	37.2	37.1	35.9	35.9	37.5	37.9	37.6	38.6	38.4	38.6	37.5
Dyeing and finishing textiles	41.2	42.5	41.8	41.4	41.1	41.4	39.5	39.5	40.6	40.0	38.6	40.1	39.9	41.8	40.5
Carpets, rugs, other floor coverings	41.0	42.1	40.7	40.6	40.3	40.3	40.1	40.0	40.8	40.8	40.6	41.2	40.4	41.8	40.9
Hats (except cloth and millinery)	38.0	37.9	37.3	37.3	35.7	36.1	36.7	34.2	36.5	35.8	34.9	37.3	34.7	36.3	35.6
Miscellaneous textile goods	40.3	41.0	40.2	40.1	39.8	39.2	39.7	38.9	39.8	40.2	39.6	40.2	39.9	40.5	39.4
Apparel and other finished textile products	36.3	35.7	35.2	35.4	35.7	35.1	34.4	33.4	35.3	35.5	35.4	36.7	36.4	35.6	35.4
Men's and boys' suits and coats	36.4	35.4	35.0	34.4	34.6	35.1	35.4	33.2	35.4	36.4	36.5	37.7	38.2	37.2	34.3
Men's and boys' furnishings and work clothing	37.0	36.6	35.9	35.3	35.5	35.0	34.4	34.3	34.9	35.9	36.5	37.4	37.3	37.8	36.0
Women's outerwear	34.6	33.3	33.1	34.5	34.9	33.7	32.4	31.0	33.4	32.5	32.6	34.9	34.3	34.6	34.1
Women's, children's undergarments	36.7	36.4	36.0	36.4	36.3	35.7	35.5	34.3	36.8	37.0	36.4	36.7	35.9	36.9	36.2
Millinery	34.7	34.0	29.9	32.9	36.9	37.8	33.0	29.8	32.1	36.4	35.1	36.0	34.2	34.2	33.9
Children's outerwear	37.3	37.0	35.6	34.8	35.8	36.8	35.9	32.5	35.8	36.0	34.4	37.1	37.0	36.5	36.4
Miscellaneous apparel and accessories	36.1	36.6	35.9	35.9	36.2	35.8	35.5	34.2	35.6	36.8	35.9	36.7	36.2	37.0	36.0
Other fabricated textile products	38.3	38.5	37.9	38.6	38.7	37.6	36.9	37.0	39.2	39.0	38.0	38.0	38.2	38.2	37.4
	Average hourly earnings														
Textile-mill products	$1.64	$1.64	$1.64	$1.64	$1.63	$1.63	$1.62	$1.62	$1.62	$1.63	$1.62	$1.62	$1.62	$1.57	$1.51
Scouring and combing plants	1.75	1.76	1.75	1.77	1.75	1.75	1.76	1.73	1.73	1.73	1.72	1.75	1.76	1.71	1.60
Yarn and thread mills	1.53	1.53	1.53	1.53	1.51	1.52	1.51	1.50	1.51	1.51	1.51	1.51	1.52	1.47	1.40
Broad-woven fabric mills	1.61	1.61	1.61	1.60	1.60	1.59	1.59	1.59	1.59	1.60	1.60	1.61	1.61	1.54	1.45
Narrow fabrics and smallwares	1.70	1.69	1.69	1.68	1.66	1.66	1.66	1.67	1.69	1.68	1.68	1.67	1.66	1.61	1.54
Knitting mills	1.53	1.54	1.54	1.54	1.54	1.53	1.52	1.52	1.53	1.53	1.52	1.51	1.50	1.49	1.46
Dyeing and finishing textiles	1.79	1.80	1.79	1.79	1.79	1.80	1.77	1.76	1.77	1.78	1.76	1.76	1.77	1.71	1.68
Carpets, rugs, other floor coverings	1.97	1.99	1.99	1.98	1.95	1.95	1.95	1.96	1.95	1.96	1.95	1.96	1.97	1.95	1.89
Hats (except cloth and millinery)	1.70	1.76	1.73	1.70	1.67	1.69	1.70	1.69	1.68	1.65	1.65	1.63	1.67	1.70	1.65
Miscellaneous textile goods	1.93	1.94	1.92	1.91	1.90	1.88	1.89	1.90	1.90	1.91	1.91	1.88	1.89	1.82	1.78
Apparel and other finished textile products	1.59	1.58	1.58	1.59	1.60	1.59	1.59	1.57	1.58	1.59	1.58	1.57	1.55	1.52	1.51
Men's and boys' suits and coats	1.89	1.92	1.93	1.90	1.89	1.89	1.89	1.89	1.90	1.91	1.91	1.92	1.85	1.76	1.76
Men's and boys' furnishings and work clothing	1.33	1.32	1.32	1.33	1.34	1.34	1.34	1.32	1.33	1.33	1.33	1.32	1.32	1.29	1.28
Women's outerwear	1.81	1.75	1.75	1.78	1.78	1.76	1.75	1.73	1.75	1.78	1.77	1.75	1.71	1.72	1.69
Women's, children's undergarments	1.43	1.44	1.45	1.45	1.46	1.45	1.45	1.44	1.44	1.45	1.43	1.42	1.40	1.39	1.37
Millinery	2.11	1.89	1.83	1.87	1.92	1.98	1.91	1.81	1.83	1.91	1.91	1.93	1.96	1.84	1.83
Children's outerwear	1.46	1.46	1.46	1.44	1.46	1.46	1.46	1.43	1.42	1.44	1.46	1.44	1.44	1.40	1.38
Miscellaneous apparel and accessories	1.47	1.47	1.48	1.48	1.48	1.46	1.48	1.47	1.47	1.50	1.48	1.47	1.46	1.42	1.41
Other fabricated textile products	1.69	1.70	1.69	1.69	1.67	1.67	1.69	1.69	1.71	1.70	1.66	1.62	1.67	1.58	1.52

See footnotes at end of table.

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TABLE C–1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
Average weekly earnings															
Manufacturing—Continued															
Nondurable goods—Continued															
Paper and allied products	$101.91	$101.24	$98.75	$98.33	$96.98	$96.74	$96.28	$95.35	$96.37	$97.71	$98.14	$97.75	$97.33	$94.16	$88.83
Pulp, paper, and paperboard mills	110.88	109.75	107.88	107.69	105.78	105.53	105.29	105.47	105.53	106.76	107.20	106.82	106.87	102.73	96.10
Paperboard containers and boxes	94.95	95.40	91.43	91.24	89.51	88.66	88.22	85.24	88.34	91.10	91.30	90.69	88.99	87.78	82.41
Other paper and allied products	90.27	88.99	87.94	87.10	87.31	86.48	85.44	85.01	85.68	85.06	85.68	85.90	85.49	83.42	78.96
Printing, publishing, and allied industries	106.97	107.35	107.07	106.69	106.88	105.94	106.22	106.31	106.96	107.14	108.08	106.09	106.20	103.41	97.90
Newspapers	111.97	113.28	113.96	112.29	110.63	110.28	110.28	115.16	114.16	113.49	113.49	110.14	111.47	108.28	103.43
Periodicals	116.44	113.81	109.25	108.81	111.56	112.28	114.21	110.92	115.59	117.83	125.38	119.19	120.10	113.15	102.97
Books	97.69	98.25	97.61	95.60	95.20	96.00	93.93	91.10	93.62	93.77	93.53	97.17	92.97	90.82	85.80
Commercial printing	105.38	104.94	104.83	105.11	106.74	104.72	106.35	105.54	106.11	106.92	108.80	105.72	105.18	102.96	97.22
Lithographing	111.44	110.65	109.03	110.21	111.28	108.47	108.47	106.30	107.25	107.64	110.48	112.16	109.97	106.40	98.81
Greeting cards	71.25	72.58	73.60	76.38	75.44	75.08	76.24	71.00	73.68	74.40	73.66	71.55	73.30	70.07	67.03
Bookbinding and related industries	85.31	85.69	84.42	83.82	84.70	85.14	85.03	81.99	83.71	83.93	82.56	82.64	82.60	80.80	74.86
Miscellaneous publishing and printing services	124.03	123.39	122.18	120.40	121.59	120.96	119.11	115.44	118.27	117.66	118.87	116.73	119.81	116.19	110.75
Average weekly hours															
Paper and allied products	43.0	42.9	42.2	42.2	41.8	41.7	41.5	41.1	41.9	42.3	42.3	42.5	42.5	42.8	41.9
Pulp, paper, and paperboard mills	44.0	43.9	43.5	43.6	43.0	42.9	42.8	42.7	42.9	43.4	43.4	43.6	43.8	43.9	42.9
Paperboard containers and boxes	42.2	42.4	41.0	41.1	40.5	40.3	40.1	39.1	40.9	41.6	41.5	41.6	41.2	41.8	41.0
Other paper and allied products	41.6	41.2	40.9	40.7	40.8	40.6	40.3	40.1	40.8	40.7	40.8	41.1	41.1	41.5	40.7
Printing, publishing, and allied industries	37.8	37.8	37.7	37.7	37.9	37.7	37.8	37.7	38.2	38.4	38.6	38.3	38.2	38.3	37.8
Newspapers	35.1	35.4	35.5	35.2	34.9	34.9	34.9	36.1	35.9	35.8	35.8	35.3	35.5	35.5	35.3
Periodicals	41.0	40.5	39.3	39.0	39.7	40.1	40.5	39.9	40.7	41.2	42.5	41.1	41.7	40.7	39.3
Books	40.2	40.1	40.5	40.0	40.0	40.0	39.8	38.6	39.5	39.9	39.8	41.0	39.9	39.7	39.0
Commercial printing	38.6	38.3	38.4	38.5	39.1	38.5	39.1	38.8	39.3	39.6	40.0	39.3	39.1	39.6	39.2
Lithographing	39.1	39.1	38.8	39.5	39.6	38.6	38.6	38.1	39.0	39.0	39.6	40.2	39.7	39.7	38.9
Greeting cards	38.1	38.2	36.8	38.0	38.1	38.5	38.7	36.6	39.4	40.0	39.6	39.1	39.2	38.5	38.3
Bookbinding and related industries	38.6	38.6	38.2	38.1	38.5	38.7	38.3	37.1	38.4	38.5	38.4	38.8	38.6	38.7	38.0
Miscellaneous publishing and printing services	38.4	38.2	38.3	38.1	38.6	38.4	38.3	37.9	38.4	38.2	38.1	37.9	38.4	38.6	37.8
Average hourly earnings															
Paper and allied products	$2.37	$2.36	$2.34	$2.33	$2.32	$2.32	$2.32	$2.32	$2.30	$2.31	$2.32	$2.30	$2.29	$2.20	$2.12
Pulp, paper, and paperboard mills	2.52	2.50	2.48	2.47	2.46	2.46	2.46	2.47	2.46	2.46	2.47	2.45	2.44	2.34	2.24
Paperboard containers and boxes	2.25	2.25	2.23	2.22	2.21	2.20	2.20	2.18	2.16	2.19	2.20	2.18	2.16	2.10	2.01
Other paper and allied products	2.17	2.16	2.15	2.14	2.14	2.13	2.12	2.12	2.10	2.09	2.10	2.09	2.08	2.01	1.94
Printing, publishing, and allied industries	2.83	2.84	2.84	2.83	2.82	2.81	2.81	2.82	2.80	2.79	2.80	2.77	2.78	2.70	2.89
Newspapers	3.19	3.20	3.21	3.19	3.17	3.16	3.16	3.19	3.18	3.17	3.17	3.12	3.14	3.05	2.93
Periodicals	2.84	2.81	2.78	2.79	2.81	2.80	2.82	2.78	2.84	2.86	2.95	2.90	2.88	2.78	2.62
Books	2.43	2.45	2.41	2.39	2.38	2.40	2.36	2.36	2.37	2.35	2.35	2.37	2.33	2.28	2.20
Commercial printing	2.73	2.74	2.73	2.73	2.73	2.72	2.72	2.72	2.70	2.70	2.72	2.69	2.69	2.60	2.48
Lithographing	2.85	2.83	2.81	2.79	2.81	2.81	2.81	2.79	2.75	2.76	2.79	2.79	2.77	2.68	2.54
Greeting cards	1.87	1.90	2.00	2.01	1.98	1.95	1.97	1.94	1.87	1.86	1.86	1.83	1.87	1.82	1.75
Bookbinding and related industries	2.21	2.22	2.21	2.20	2.20	2.20	2.22	2.21	2.18	2.18	2.15	2.13	2.14	2.08	1.97
Miscellaneous publishing and printing services	3.23	3.23	3.19	3.16	3.15	3.15	3.11	3.12	3.08	3.08	3.12	3.08	3.12	3.01	2.93

See footnotes at end of table.

TABLE C-1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
	Average weekly earnings														
Manufacturing—Continued															
Nondurable goods—Continued															
Chemicals and allied products	$108.73	$109.10	$106.14	$105.32	$104.90	$104.30	$104.81	$104.30	$105.16	$104.24	$104.90	$104.90	$106.08	$100.02	$94.48
Industrial inorganic chemicals	120.35	120.25	117.99	117.58	116.88	115.62	117.58	116.75	117.03	117.16	117.16	116.05	117.46	111.64	104.70
Industrial organic chemicals	115.51	115.64	113.16	112.48	111.25	110.98	110.98	111.25	111.65	110.16	110.97	110.42	113.13	106.81	100.04
Drugs and medicines	96.64	97.77	96.00	95.44	95.99	95.58	95.18	93.53	95.75	94.30	95.18	94.02	94.60	90.58	85.88
Soap, cleaning and polishing preparations	118.44	119.71	113.44	113.16	112.48	111.38	111.93	109.89	112.19	113.30	112.19	114.93	111.51	105.47	100.86
Paints, pigments, and fillers	104.74	105.50	104.33	102.91	101.50	99.85	100.50	100.00	101.34	101.34	100.78	101.27	101.11	98.29	93.25
Gum and wood chemicals	91.98	89.45	89.67	88.99	87.99	88.41	91.57	89.46	88.20	88.41	93.09	88.62	93.10	83.36	80.45
Fertilizers	82.41	82.10	80.56	79.30	83.17	80.89	81.94	82.03	80.51	80.94	81.64	80.37	81.90	78.12	74.03
Vegetable and animal oils and fats	96.79	95.23	92.84	89.82	88.54	88.91	91.35	87.81	90.09	90.94	90.35	90.50	92.42	85.44	82.21
Miscellaneous chemicals	99.80	99.39	97.85	97.61	97.61	97.12	97.12	95.44	97.27	96.22	95.99	95.18	95.99	91.58	87.02
Products of petroleum and coal	127.38	126.16	123.82	124.23	122.31	120.80	124.42	119.07	117.97	117.62	120.60	117.62	121.18	117.38	110.97
Petroleum refining	132.19	130.60	128.84	129.47	127.48	126.36	129.90	123.32	122.91	121.80	124.53	120.90	124.84	121.29	114.90
Coke, other petroleum and coal products	112.89	112.89	108.32	105.97	103.34	99.18	104.40	102.96	102.31	104.70	108.52	107.43	109.82	105.83	97.28
Rubber products	107.04	103.86	101.89	100.47	97.66	97.27	98.81	99.58	99.57	101.49	98.28	100.18	103.53	101.60	92.59
Tires and inner tubes	130.31	122.28	115.58	115.20	111.53	110.78	113.54	118.59	114.60	117.00	112.40	114.66	123.71	120.01	98.04
Rubber footwear	85.36	82.89	86.24	86.65	82.92	85.60	82.32	79.00	82.16	82.59	79.18	81.40	82.21	79.19	176.62
Other rubber products	95.34	95.18	95.00	92.80	90.62	90.16	91.01	89.40	92.17	93.73	92.10	92.78	91.66	92.99	84.59
	Average weekly hours														
Chemicals and allied products	41.5	41.8	41.3	41.3	41.3	40.9	41.1	40.9	41.4	41.2	41.3	41.3	41.6	41.5	40.9
Industrial inorganic chemicals	41.5	41.9	41.4	41.4	41.3	41.0	41.4	41.4	41.5	41.4	41.4	41.3	41.8	41.5	40.9
Industrial organic chemicals	41.7	41.9	41.3	41.2	40.9	40.8	40.8	40.9	41.2	40.8	41.1	41.2	41.9	41.4	40.8
Drugs and medicines	40.1	40.4	40.0	40.1	40.5	40.5	40.5	39.8	40.4	40.3	40.5	40.7	40.6	40.8	40.7
Soap, cleaning and polishing preparations	42.3	42.6	41.1	41.3	41.2	40.8	41.0	40.7	41.4	41.5	41.4	42.1	41.3	41.2	41.0
Paints, pigments, and fillers	41.4	41.7	41.4	41.0	40.6	40.1	40.2	40.0	40.7	40.7	40.8	41.0	41.1	41.3	40.9
Gum and wood chemicals	42.0	41.8	41.9	41.2	41.9	41.9	43.4	42.6	41.8	41.9	43.5	42.4	43.3	42.1	41.9
Fertilizers	41.0	42.1	42.4	43.1	45.2	42.8	42.9	42.5	42.6	42.6	42.3	42.3	42.0	43.4	42.3
Vegetable and animal oils and fats	44.4	44.5	44.0	43.6	43.4	43.8	45.0	44.8	46.2	46.4	45.4	43.3	43.8	44.5	44.2
Miscellaneous chemicals	40.9	40.9	40.6	40.5	40.5	40.3	40.3	39.6	40.7	40.6	40.5	40.5	40.5	40.7	40.1
Products of petroleum and coal	41.9	41.5	41.0	41.0	40.5	40.0	41.2	40.5	40.4	40.7	41.3	40.7	41.5	40.9	40.5
Petroleum refining	41.7	41.2	40.9	41.1	40.6	40.5	41.5	40.7	40.7	40.6	41.1	40.3	41.2	40.7	40.6
Coke, other petroleum and coal products	42.6	42.6	41.5	40.6	39.9	38.0	40.0	39.6	39.5	40.9	41.9	41.8	42.4	41.5	40.2
Rubber products	40.7	40.1	39.8	39.4	38.6	38.6	38.9	38.9	39.2	39.8	39.0	39.6	40.6	41.3	39.4
Tires and inner tubes	41.5	39.7	38.4	38.4	37.3	37.3	38.1	39.4	38.2	39.0	38.1	39.0	41.1	41.1	38.7
Rubber footwear	39.7	39.1	40.3	40.3	39.3	40.0	39.2	37.8	39.5	39.9	39.2	40.1	40.3	40.2	39.7
Other rubber products	40.4	40.5	40.6	40.0	39.4	39.2	39.4	38.7	39.9	40.4	39.7	40.5	40.2	41.7	39.9
	Average hourly earnings														
Chemicals and allied products	$2.62	$2.61	$2.57	$2.55	$2.54	$2.55	$2.55	$2.55	$2.54	$2.53	$2.54	$2.54	$2.55	$2.41	$2.31
Industrial inorganic chemicals	2.90	2.87	2.85	2.84	2.83	2.82	2.84	2.82	2.82	2.83	2.83	2.81	2.81	2.69	2.56
Industrial organic chemicals	2.77	2.76	2.74	2.73	2.72	2.72	2.72	2.72	2.71	2.70	2.70	2.68	2.70	2.58	2.47
Drugs and medicines	2.41	2.42	2.40	2.38	2.37	2.36	2.35	2.35	2.37	2.34	2.35	2.31	2.33	2.29	2.11
Soap, cleaning and polishing preparations	2.80	2.81	2.76	2.74	2.73	2.73	2.73	2.70	2.71	2.73	2.71	2.73	2.70	2.56	2.46
Paints, pigments and fillers	2.53	2.53	2.52	2.51	2.50	2.49	2.50	2.50	2.49	2.49	2.47	2.47	2.46	2.38	2.28
Gum and wood chemicals	2.19	2.14	2.14	2.16	2.10	2.11	2.11	2.10	2.11	2.11	2.14	2.09	2.15	1.98	1.92
Fertilizers	2.01	1.95	1.90	1.84	1.84	1.89	1.91	1.93	1.89	1.90	1.93	1.90	1.95	1.80	1.75
Vegetable and animal oils and fats	2.18	2.14	2.11	2.06	2.04	2.03	2.03	1.96	1.95	1.96	1.99	2.09	2.11	1.92	1.86
Miscellaneous chemicals	2.44	2.43	2.41	2.41	2.41	2.41	2.41	2.41	2.39	2.37	2.37	2.35	2.37	2.26	2.17
Products of petroleum and coal	3.04	3.04	3.02	3.03	3.02	3.02	3.02	2.94	2.92	2.89	2.92	2.89	2.92	2.87	2.74
Petroleum refining	3.17	3.17	3.15	3.15	3.14	3.12	3.13	3.03	3.02	3.00	3.03	3.00	3.03	2.98	2.83
Coke, other petroleum and coal products	2.65	2.65	2.61	2.61	2.59	2.61	2.61	2.60	2.59	2.56	2.59	2.57	2.59	2.55	2.42
Rubber products	2.63	2.59	2.56	2.55	2.53	2.52	2.54	2.56	2.54	2.53	2.52	2.51	2.55	2.46	2.35
Tires and inner tubes	3.14	3.08	3.01	3.00	2.99	2.97	2.98	3.01	3.00	3.00	2.95	2.94	3.01	2.92	2.74
Rubber footwear	2.15	2.12	2.14	2.15	2.11	2.14	2.10	2.09	2.08	2.07	2.02	2.03	2.04	1.97	1.93
Other rubber products	2.36	2.35	2.34	2.32	2.30	2.30	2.31	2.31	2.31	2.32	2.32	2.29	2.28	2.23	2.12

See footnotes at end of table.

TABLE C–1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
Average weekly earnings															
Manufacturing—Continued															
Nondurable goods—Continued															
Leather and leather products	$63.96	$63.84	$61.82	$60.31	$61.79	$62.46	$62.91	$59.24	$60.42	$59.59	$59.24	$62.48	$62.98	$60.70	$57.78
Leather: tanned, curried, and finished	85.97	86.80	85.32	85.75	83.64	81.96	82.60	82.39	84.07	84.74	84.10	84.56	82.68	80.94	78.39
Industrial leather belting and packing	82.08	88.40	82.14	80.36	80.52	81.99	82.81	79.76	81.58	80.57	78.74	78.74	80.20	79.56	76.62
Boot and shoe cut stock and findings	60.99	61.85	60.10	57.88	58.67	59.63	61.22	58.78	59.94	55.77	54.01	59.03	59.21	57.30	56.02
Footwear (except rubber)	62.05	61.24	59.33	57.21	59.50	60.26	61.02	56.76	56.64	55.36	55.65	60.26	61.22	58.34	54.87
Luggage	67.76	70.67	68.17	67.30	67.08	64.44	63.54	57.63	65.62	65.32	68.46	65.18	64.30	65.18	63.46
Handbags and small leather goods	59.57	57.24	56.41	56.63	60.22	59.75	58.97	52.08	60.92	62.17	58.19	58.45	58.14	56.45	55.54
Gloves and miscellaneous leather goods	53.51	54.54	54.10	54.39	54.02	54.24	52.77	54.09	55.13	54.67	53.22	54.52	53.43	51.89	50.40
Transportation and public utilities:															
Transportation:															
Interstate railroads:															
Class I railroads [3]	----	114.38	113.95	108.27	111.41	115.02	108.92	111.04	106.92	108.39	107.18	110.33	107.42	106.43	101.50
Local railways and busines	101.76	103.97	102.53	101.15	101.10	101.63	100.20	102.62	99.72	98.83	99.96	100.22	100.22	94.59	90.52
Communication:															
Telephone	93.46	92.12	91.03	90.17	90.02	90.71	90.48	91.64	92.92	92.00	95.47	89.27	89.95	85.46	78.73
Telegraph [4]	104.90	105.33	106.00	102.51	103.17	102.01	103.00	100.77	100.98	103.70	106.14	103.09	102.37	95.99	90.06
Other public utilities:															
Gas and electric utilities	114.39	113.02	112.46	112.46	112.33	113.29	112.88	114.40	113.30	112.89	115.37	110.16	110.02	105.78	100.37
Electric light and power utilities	115.21	113.70	112.61	112.61	112.74	112.33	112.61	113.57	113.03	111.66	116.89	110.97	110.97	106.34	101.43
Gas utilities	106.78	104.78	104.26	104.92	104.49	105.82	105.15	107.23	105.63	106.97	104.04	102.21	102.21	99.39	94.83
Electric light and gas utilities combined	120.47	119.72	118.84	118.44	118.32	120.60	119.48	121.47	120.47	120.64	123.06	118.87	115.34	110.56	103.63
Average weekly hours															
Manufacturing—Continued															
Nondurable goods—Continued															
Leather and leather products	38.3	38.0	36.8	35.9	37.0	37.4	37.9	35.9	36.4	35.9	35.9	38.1	38.4	37.7	36.8
Leather: tanned, curried, and finished	39.8	40.0	39.5	39.7	38.9	38.3	38.6	38.5	39.1	39.6	39.3	39.7	39.0	39.1	39.0
Industrial leather belting and packing	38.9	41.5	39.3	39.2	38.9	39.8	40.2	39.1	39.6	39.3	38.6	38.6	40.1	40.8	39.7
Boot and shoe cut stock and findings	38.6	38.9	37.8	36.4	36.9	37.5	38.5	37.2	37.7	35.3	34.4	37.6	38.2	37.7	37.1
Footwear (except rubber)	38.3	37.8	36.4	35.1	36.5	37.2	37.9	35.7	35.4	34.6	35.0	37.9	38.5	37.4	36.1
Luggage	38.5	39.7	38.3	37.6	37.9	36.2	35.9	34.1	38.6	38.2	39.8	38.8	38.5	38.8	38.0
Handbags and small leather goods	37.7	36.0	35.7	36.3	38.6	38.3	37.8	33.6	38.8	39.6	37.3	38.2	38.0	38.4	38.3
Gloves and miscellaneous leather goods	36.4	37.1	36.8	37.0	37.0	36.9	36.9	37.3	37.5	37.7	36.7	37.6	36.1	36.8	36.0
Transportation and public utilities:															
Transportation:															
Interstate railroads:															
Class I railroads [3]	----	43.0	43.0	40.4	42.2	42.6	41.1	41.9	40.5	40.9	40.6	42.6	41.0	41.9	41.6
Local railways and busines	42.4	43.5	42.9	42.5	42.3	42.7	42.1	43.3	42.8	42.6	42.9	43.2	43.2	42.8	42.7
Communication:															
Telephone	39.6	39.2	38.9	38.7	38.8	39.1	39.0	39.5	40.4	40.0	40.8	39.5	39.8	39.2	38.4
Telegraph [4]	42.3	42.3	42.4	41.5	41.6	41.3	41.7	41.3	41.9	42.5	43.5	42.6	42.3	42.1	41.5
Other public utilities:															
Gas and electric utilities	41.0	40.8	40.6	40.6	40.7	40.9	40.9	41.3	41.2	41.2	41.8	40.8	40.9	41.0	40.8
Electric light and power utilities	41.0	40.9	40.8	40.8	40.7	40.7	40.8	41.0	41.1	40.9	42.2	41.1	41.1	40.9	40.9
Gas utilities	40.6	40.3	40.1	40.2	40.5	40.7	40.6	41.4	41.1	41.3	40.8	40.4	40.4	40.9	40.7
Electric light and gas utilities combined	41.4	41.0	40.7	40.7	40.8	41.3	41.2	41.6	41.4	41.6	42.0	40.8	40.9	41.1	40.8
Average hourly earnings															
Manufacturing—Continued															
Nondurable goods—Continued															
Leather and leather products	$1.67	$1.68	$1.68	$1.68	$1.67	$1.67	$1.66	$1.65	$1.66	$1.66	$1.65	$1.64	$1.64	$1.61	$1.57
Leather: tanned, curried, and finished	2.16	2.17	2.16	2.16	2.15	2.14	2.14	2.14	2.15	2.14	2.14	2.13	2.12	2.07	2.01
Industrial leather belting and packing	2.11	2.13	2.09	2.05	2.07	2.06	2.06	2.04	2.06	2.05	2.04	2.04	2.00	1.95	1.93
Boot and shoe cut stock and findings	1.58	1.59	1.59	1.59	1.59	1.59	1.59	1.58	1.59	1.58	1.57	1.57	1.55	1.52	1.51
Footwear (except rubber)	1.62	1.62	1.63	1.63	1.63	1.62	1.61	1.59	1.60	1.60	1.59	1.59	1.59	1.56	1.52
Luggage	1.76	1.78	1.78	1.79	1.77	1.78	1.77	1.69	1.70	1.71	1.72	1.68	1.67	1.68	1.67
Handbags and small leather goods	1.58	1.59	1.58	1.56	1.56	1.56	1.56	1.55	1.57	1.57	1.56	1.53	1.53	1.47	1.48
Gloves and miscellaneous leather goods	1.47	1.47	1.47	1.47	1.46	1.47	1.43	1.45	1.47	1.45	1.45	1.45	1.48	1.41	1.40
Transportation and public utilities:															
Transportation:															
Interstate railroads:															
Class I railroads [3]	----	2.66	2.65	2.68	2.64	2.70	2.65	2.65	2.64	2.65	2.64	2.59	2.62	2.54	2.44
Local railways and busines	2.40	2.39	2.39	2.38	2.39	2.38	2.38	2.37	2.33	2.32	2.33	2.32	2.32	2.21	2.12
Communication:															
Telephone	2.36	2.35	2.34	2.33	2.32	2.32	2.32	2.32	2.30	2.30	2.34	2.26	2.26	2.18	2.05
Telegraph [4]	2.48	2.49	2.50	2.47	2.48	2.47	2.47	2.44	2.41	2.44	2.44	2.42	2.42	2.28	2.17
Other public utilities:															
Gas and electric utilities	2.79	2.77	2.77	2.77	2.76	2.77	2.76	2.77	2.75	2.74	2.76	2.70	2.69	2.58	2.46
Electric light and power utilities	2.81	2.78	2.76	2.76	2.77	2.76	2.76	2.77	2.75	2.73	2.77	2.70	2.70	2.60	2.48
Gas utilities	2.63	2.60	2.60	2.61	2.58	2.60	2.59	2.59	2.57	2.59	2.55	2.53	2.53	2.43	2.33
Electric light and gas utilities combined	2.91	2.92	2.92	2.91	2.90	2.92	2.90	2.92	2.91	2.90	2.93	2.84	2.82	2.69	2.54

See footnotes at end of table.

TABLE C–1. Gross hours and earnings of production workers,[1] by industry—Continued

Industry	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
Average weekly earnings															
Wholesale and retail trade:															
Wholesale trade	$96.80	$96.32	$95.04	$94.64	$94.00	$93.37	$94.07	$93.20	$93.67	$93.90	$94.13	$93.56	$94.19	$90.27	$87.02
Retail trade (except eating and drinking places)	71.63	70.69	69.56	69.01	68.44	69.00	69.00	67.11	68.25	68.44	68.43	69.32	69.52	67.06	64.77
General merchandise stores	52.10	51.11	50.32	49.69	49.49	49.35	49.69	49.56	48.53	48.87	49.30	50.26	50.75	48.37	46.85
Department stores and general mail-order houses	58.47	57.60	56.93	55.58	55.06	54.74	55.09	56.00	53.90	54.90	55.71	56.32	56.99	54.36	52.60
Food and liquor stores	75.30	74.61	73.36	72.59	72.10	72.10	72.31	71.25	73.69	72.01	72.27	72.76	73.16	69.89	67.52
Automotive and accessories dealers	93.07	93.05	91.75	90.43	89.76	87.40	88.71	88.48	89.79	89.59	88.24	89.96	91.29	88.24	83.22
Apparel and accessories stores	55.17	54.86	53.72	52.91	52.39	53.85	53.74	53.28	52.51	52.82	52.48	52.65	52.59	51.90	50.81
Other retail trade:															
Furniture and appliance stores	79.37	80.15	77.90	77.93	76.70	76.14	76.95	79.30	77.74	77.14	77.30	77.49	76.70	75.76	72.31
Lumber and hardware supply stores	84.38	84.18	83.78	81.93	81.12	80.73	81.34	80.12	81.93	83.56	82.94	83.09	83.50	79.95	77.04
Finance, insurance, and real estate:															
Banks and trust companies [3]	71.97	71.59	71.60	71.99	71.80	71.42	71.81	70.69	70.31	70.69	69.75	69.75	70.31	68.07	66.57
Security dealers and exchanges	128.39	141.69	150.44	150.82	139.94	128.32	117.40	115.76	108.81	112.25	115.61	113.14	117.33	119.24	106.88
Insurance carriers	89.63	89.84	89.88	89.64	89.44	89.22	89.44	88.75	88.50	88.40	87.92	88.34	88.08	85.79	82.97
Service and miscellaneous:															
Hotels and lodging places:															
Hotels, year-round [4]	50.25	50.80	50.27	49.23	49.60	49.10	48.83	49.63	49.23	49.48	48.83	49.04	48.80	47.44	45.20
Personal services:															
Laundries	49.63	50.40	49.88	48.48	48.36	47.72	47.85	47.48	48.22	48.83	48.46	48.07	48.56	46.45	44.30
Cleaning and dyeing plants	56.02	58.03	57.49	54.24	54.67	53.53	54.53	52.82	54.57	56.20	54.67	53.02	54.43	53.29	50.82
Motion pictures:															
Motion-picture production and distribution	122.24	122.59	117.99	117.16	121.31	121.50	117.66	121.25	122.48	116.15	116.48	118.61	114.62	108.36	98.65
Average weekly hours															
Wholesale and retail trade:															
Wholesale trade	40.5	40.3	40.1	40.1	40.0	39.9	40.2	40.0	40.2	40.3	40.4	40.5	40.6	40.3	40.1
Retail trade (except eating and drinking places)	38.1	37.8	37.4	37.3	37.4	37.5	37.5	37.7	37.5	37.4	37.6	38.3	38.2	38.1	38.1
General merchandise stores	34.5	34.3	34.0	33.8	33.9	33.8	33.8	35.4	33.7	33.7	34.0	34.9	35.0	34.9	34.7
Department stores and general mail-order houses	34.6	34.7	34.5	34.1	34.2	34.0	33.8	35.9	33.9	34.1	34.6	35.2	35.4	35.3	35.3
Food and liquor stores	36.2	35.7	35.1	34.9	35.0	35.0	35.1	35.1	35.6	35.3	35.6	36.2	36.4	36.4	36.3
Automotive and accessories dealers	43.9	44.1	43.9	43.9	44.0	43.7	43.7	43.8	43.8	43.7	43.9	44.1	44.1	43.9	43.8
Apparel and accessories stores	34.7	34.5	34.0	33.7	33.8	34.3	33.8	34.6	34.1	34.3	34.3	35.1	34.6	34.6	34.8
Other retail trade:															
Furniture and appliance stores	40.7	41.1	41.0	40.8	40.8	40.5	40.5	41.3	40.7	40.6	40.9	41.0	40.8	41.4	41.8
Lumber and hardware supply stores	42.4	42.3	42.1	41.8	41.6	41.4	41.5	41.3	41.8	42.2	42.1	42.7	42.6	42.3	42.1
Finance, insurance, and real estate:															
Banks and trust companies [3]	37.1	36.9	37.1	37.3	37.2	37.2	37.4	37.4	37.2	37.4	37.1	37.3	37.4	37.4	37.4
Security dealers and exchanges															
Insurance carriers															
Service and miscellaneous:															
Hotels and lodging places:															
Hotels, year-round [4]	40.2	40.0	39.9	39.7	40.0	39.6	39.7	39.7	39.7	39.9	39.7	40.2	40.0	40.2	40.0
Personal services:															
Laundries	39.7	40.0	39.9	39.1	39.0	38.8	38.9	38.6	39.2	39.7	39.4	39.4	39.8	39.7	39.2
Cleaning and dyeing plants	38.9	40.3	40.2	38.2	38.5	37.7	38.4	37.2	38.7	39.3	38.5	37.6	38.6	38.9	38.5
Motion pictures:															
Motion-picture production and distribution															
Average hourly earnings															
Wholesale and retail trade:															
Wholesale trade	$2.39	$2.39	$2.37	$2.36	$2.35	$2.34	$2.34	$2.33	$2.33	$2.33	$2.33	$2.31	$2.32	$2.24	$2.17
Retail trade (except eating and drinking places)	1.88	1.87	1.86	1.85	1.83	1.84	1.84	1.78	1.82	1.83	1.82	1.81	1.82	1.76	1.70
General merchandise stores	1.51	1.47	1.48	1.47	1.46	1.46	1.47	1.40	1.44	1.45	1.45	1.44	1.45	1.39	1.35
Department stores and general mail-order houses	1.69	1.66	1.65	1.63	1.61	1.61	1.63	1.56	1.59	1.61	1.61	1.60	1.61	1.54	1.49
Food and liquor stores	2.08	2.09	2.09	2.08	2.06	2.06	2.06	2.03	2.07	2.04	2.03	2.01	2.01	1.92	1.86
Automotive and accessories dealers	2.12	2.11	2.09	2.06	2.04	2.00	2.03	2.02	2.05	2.05	2.01	2.04	2.07	2.01	1.90
Apparel and accessories stores	1.59	1.59	1.58	1.57	1.55	1.57	1.59	1.54	1.54	1.54	1.53	1.50	1.52	1.50	1.46
Other retail trade:															
Furniture and appliance stores	1.95	1.95	1.90	1.91	1.88	1.88	1.90	1.92	1.91	1.90	1.89	1.89	1.88	1.83	1.73
Lumber and hardware supply stores	1.99	1.99	1.99	1.96	1.95	1.95	1.96	1.94	1.96	1.98	1.97	1.96	1.96	1.89	1.83
Finance, insurance, and real estate:															
Banks and trust companies [3]	1.94	1.94	1.93	1.93	1.93	1.92	1.92	1.89	1.89	1.89	1.88	1.87	1.88	1.82	1.78
Security dealers and exchanges															
Insurance carriers															
Service and miscellaneous:															
Hotels and lodging places:															
Hotels, year-round [4]	1.25	1.27	1.26	1.24	1.24	1.24	1.23	1.25	1.24	1.24	1.23	1.22	1.22	1.18	1.13
Personal services:															
Laundries	1.25	1.26	1.25	1.24	1.24	1.23	1.23	1.23	1.23	1.23	1.23	1.22	1.22	1.17	1.13
Cleaning and dyeing plants	1.44	1.44	1.43	1.42	1.42	1.42	1.42	1.42	1.41	1.43	1.42	1.41	1.41	1.37	1.32
Motion pictures:															
Motion-picture production and distribution															

[1] For comparability of data with those published in issues prior to August 1958 and coverage of these series, see footnote 1, table A–2.

In addition, hours and earnings data for anthracite mining have been revised from January 1953 and are not comparable with those published in issues prior to August 1958.

For mining, manufacturing, laundries, and cleaning and dyeing plants, data refer to production and related workers; for contract construction, to construction workers; and for the remaining industries, unless otherwise noted, to nonsupervisory workers and working supervisors.

[2] Preliminary.

[3] Figures for Class I railroads (excluding switching and terminal companies) are based upon monthly data summarized in the M–300 report by the Interstate Commerce Commission and relate to all employees who received pay during the month, except executives, officials, and staff assistants (ICC Group I).

[4] Data relate to domestic nonsupervisory employees except messengers.

[5] Average weekly earnings have been revised beginning with January 1958 and are not strictly comparable with data for earlier years. Average weekly hours and average hourly earnings are new series, available from January 1958.

[6] Money payments only; additional value of board, room, uniforms, and tips not included.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics for all series except that for Class I railroads. (See footnote 3.)

TABLE C–2. Average overtime hours and average hourly earnings excluding overtime of production workers in manufacturing, by major industry group [1]

Major industry group	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
	Average overtime hours [3]														
Manufacturing	2.4	2.4	2.1	2.0	1.9	1.9	1.9	2.0	2.2	2.5	2.5	2.4	2.4	2.7	2.0
Durable goods	2.3	2.3	2.0	1.9	1.7	1.7	1.7	1.9	2.0	2.4	2.5	2.3	2.3	2.7	1.9
Ordnance and accessories	1.7	1.7	1.8	1.7	2.0	1.8	1.8	1.9	2.0	2.1	2.2	2.1	1.9	2.1	2.0
Lumber and wood products	3.2	3.2	2.9	2.8	2.3	2.2	2.2	2.3	2.5	3.1	3.1	3.2	3.1	3.4	2.9
Furniture and fixtures	2.2	2.2	1.7	1.8	1.7	1.5	1.6	2.3	2.3	2.7	2.8	2.8	2.3	2.9	2.1
Stone, clay, and glass products	3.3	3.3	3.0	2.7	2.5	2.4	2.3	2.5	3.0	3.1	3.1	3.2	3.1	3.4	2.8
Primary metal industries	2.0	2.0	1.5	1.4	1.2	1.2	1.4	1.3	1.2	1.3	1.6	1.4	1.7	2.6	1.8
Fabricated metal products	2.5	2.4	2.2	2.0	1.8	1.7	1.7	1.8	2.0	2.6	2.9	2.8	2.5	2.9	2.1
Machinery (except electrical)	2.2	2.3	2.1	2.0	1.9	1.9	1.8	1.9	1.9	2.1	2.3	2.3	2.5	2.7	1.7
Electrical machinery	1.8	1.9	1.5	1.5	1.4	1.6	1.6	1.9	1.7	2.1	2.1	1.9	1.6	2.2	1.5
Transportation equipment	2.1	1.9	1.9	1.8	1.5	1.6	1.5	2.1	2.4	3.1	2.9	2.3	2.2	2.5	1.9
Instruments and related products	2.1	1.9	1.9	1.8	1.7	1.7	1.8	1.9	2.1	2.2	2.2	2.2	2.2	2.3	1.5
Miscellaneous manufacturing	2.1	2.2	2.2	2.0	1.9	2.0	2.0	2.2	2.4	2.7	2.5	2.3	2.1	2.6	2.1
Nondurable goods	2.6	2.5	2.3	2.2	2.1	2.1	2.0	2.2	2.3	2.5	2.6	2.5	2.6	2.7	2.2
Food and kindred products	3.5	3.5	3.1	2.8	2.8	2.8	3.0	3.1	3.2	3.4	3.7	3.3	3.5	3.3	3.0
Tobacco manufactures	1.1	1.3	1.1	1.0	.6	.6	.7	1.2	1.2	1.4	1.4	.9	1.2	1.2	1.3
Textile-mill products	2.6	2.8	2.5	2.3	2.1	2.0	1.9	2.1	2.2	2.3	2.2	2.6	2.6	3.1	2.1
Apparel and other finished textile products	1.2	1.1	1.0	1.1	1.2	1.1	.9	.9	1.2	1.3	1.3	1.4	1.3	1.4	1.1
Paper and allied products	4.6	4.4	3.9	3.9	3.7	3.7	3.6	3.6	3.8	4.1	4.4	4.3	4.3	4.6	3.9
Printing and publishing	2.5	2.5	2.5	2.5	2.6	2.4	2.5	2.9	3.1	3.3	3.4	3.1	3.0	3.0	2.5
Chemicals and allied products	2.5	2.5	2.3	2.2	2.2	2.0	2.0	2.0	2.1	2.4	2.4	2.3	2.5	2.5	2.0
Products of petroleum and coal	2.2	2.4	1.8	1.6	1.3	1.2	1.8	1.5	1.8	1.7	2.2	1.8	2.3	1.8	1.5
Rubber products	2.8	2.3	2.2	1.9	1.4	1.6	1.6	1.6	1.8	2.3	2.3	2.3	3.0	3.7	2.3
Leather and leather products	1.3	1.4	1.1	1.1	1.3	1.4	1.5	1.2	1.2	1.3	1.2	1.6	1.4	1.4	1.1
	Average hourly earnings excluding overtime [4]														
Manufacturing	$2.28	$2.28	$2.28	$2.28	$2.27	$2.26	$2.27	$2.26	$2.24	$2.23	$2.23	$2.21	$2.22	$2.15	$2.08
Durable goods	2.44	2.44	2.44	2.43	2.42	2.42	2.42	2.42	2.39	2.39	2.39	2.37	2.38	2.30	2.23
Ordnance and accessories	2.69	2.66	2.66	2.64	2.64	2.63	2.64	2.63	2.62	2.61	2.60	2.57	2.57	2.49	2.42
Lumber and wood products	2.01	2.01	2.01	1.99	1.94	1.92	1.94	1.95	1.95	1.98	2.03	1.99	1.99	1.89	1.82
Furniture and fixtures	1.82	1.83	1.83	1.83	1.83	1.83	1.82	1.82	1.81	1.81	1.81	1.80	1.81	1.76	1.73
Stone, clay, and glass products	2.25	2.25	2.25	2.24	2.24	2.23	2.24	2.24	2.23	2.22	2.21	2.20	2.19	2.13	2.04
Primary metal industries	2.86	2.85	2.85	2.84	2.81	2.80	2.81	2.79	2.75	2.75	2.75	2.75	2.75	2.70	2.61
Fabricated metal products	2.44	2.43	2.44	2.43	2.42	2.42	2.41	2.41	2.40	2.39	2.39	2.37	2.38	2.29	2.21
Machinery (except electrical)	2.57	2.57	2.57	2.56	2.56	2.56	2.55	2.54	2.52	2.51	2.50	2.49	2.49	2.42	2.33
Electrical machinery	2.33	2.32	2.32	2.31	2.31	2.30	2.31	2.31	2.28	2.25	2.26	2.25	2.26	2.16	2.11
Transportation equipment	2.74	2.74	2.74	2.73	2.72	2.73	2.73	2.73	2.71	2.71	2.71	2.68	2.67	2.58	2.47
Instruments and related products	2.36	2.37	2.36	2.37	2.37	2.36	2.36	2.35	2.33	2.31	2.30	2.31	2.31	2.22	2.15
Miscellaneous manufacturing	1.93	1.94	1.94	1.95	1.95	1.95	1.95	1.93	1.90	1.89	1.89	1.88	1.89	1.84	1.80
Nondurable goods	2.08	2.07	2.07	2.07	2.06	2.06	2.07	2.06	2.04	2.03	2.02	2.01	2.02	1.94	1.89
Food and kindred products	2.16	2.16	2.18	2.18	2.18	2.18	2.17	2.14	2.12	2.09	2.05	2.07	2.09	2.02	1.94
Tobacco manufactures	1.85	1.87	1.86	1.86	1.80	1.77	1.75	1.75	1.71	1.58	1.55	1.69	1.79	1.64	1.57
Textile-mill products	1.58	1.59	1.59	1.59	1.59	1.58	1.58	1.58	1.58	1.58	1.57	1.57	1.57	1.52	1.47
Apparel and other finished textile products	1.57	1.55	1.56	1.56	1.57	1.57	1.57	1.54	1.56	1.56	1.55	1.54	1.52	1.49	1.49
Paper and allied products	2.25	2.24	2.24	2.23	2.23	2.22	2.22	2.22	2.20	2.20	2.20	2.19	2.18	2.09	2.02
Printing and publishing	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]	[5]
Chemicals and allied products	2.55	2.53	2.50	2.48	2.48	2.49	2.49	2.49	2.48	2.46	2.47	2.47	2.47	2.34	2.26
Products of petroleum and coal	2.97	2.96	2.96	2.97	2.97	2.97	2.96	2.88	2.86	2.84	2.85	2.83	2.85	2.81	2.69
Rubber products	2.55	2.52	2.49	2.49	2.49	2.47	2.50	2.50	2.49	2.47	2.45	2.44	2.46	2.36	2.28
Leather and leather products	1.64	1.64	1.66	1.66	1.64	1.63	1.63	1.62	1.63	1.63	1.62	1.61	1.61	1.58	1.55

[1] For comparability of data with those published in issues prior to August 1958, see footnote 1, table A–2.

[2] Preliminary.

[3] Covers premium overtime hours of production and related workers during the pay period ending nearest the 15th of the month. Overtime hours are those for which premiums were paid because the hours were in excess of the number of hours of either the straight-time workday or workweek. Weekend and holiday hours are included only if premium wage rates were paid. Hours for which only shift differential, hazard, incentive, or other similar types of premiums were paid are excluded. These data are not available prior to 1956.

[4] Derived by assuming that overtime hours are paid at the rate of time and one-half.

[5] Not available as average overtime rates are significantly above time and one-half. Inclusion of data for the group in the nondurable-goods total has little effect.

TABLE C–3. Indexes of aggregate weekly man-hours and payrolls in industrial and construction activities [1]

[1947–49=100]

Activity	1961							1960						Annual average	
	Aug.[2]	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1959	1958
Man-hours															
Total	101.7	99.1	99.3	95.0	91.8	89.9	88.7	90.1	91.5	96.8	101.0	102.1	102.4	100.7	94.8
Mining	61.9	62.3	62.2	59.7	57.8	56.4	57.5	59.2	59.8	60.0	62.6	62.9	64.9	63.4	67.9
Contract construction	145.8	140.6	137.4	122.3	111.0	101.0	95.0	101.7	103.5	121.6	138.3	139.3	144.9	123.4	118.2
Manufacturing	98.0	95.6	96.3	93.5	91.3	90.5	89.9	90.6	91.9	95.7	98.2	99.4	98.8	99.8	92.6
Durable goods	100.8	99.7	101.3	98.7	95.5	93.6	93.1	94.4	96.3	100.1	102.6	103.4	101.7	105.6	95.9
Ordnance and accessories	329.3	324.7	326.0	326.3	320.1	323.3	322.0	322.4	320.2	325.9	315.7	322.2	311.7	325.3	303.0
Lumber and wood products	78.2	76.2	78.6	72.1	67.2	63.4	62.5	64.5	65.5	68.7	75.3	78.1	78.6	78.4	72.7
Furniture and fixtures	106.7	101.9	102.0	97.7	98.5	97.3	97.0	95.9	102.2	105.1	109.4	110.0	110.6	108.7	97.2
Stone, clay, and glass products	103.0	100.2	100.1	96.9	93.5	91.4	89.0	90.2	93.2	99.2	102.2	103.0	104.9	104.6	94.7
Primary metal industries	91.3	88.8	88.7	85.2	80.8	78.1	77.3	77.7	78.0	80.3	83.2	84.7	85.4	91.1	83.7
Fabricated metal products	105.6	102.2	104.5	101.6	96.9	94.5	94.0	96.3	98.8	103.7	107.5	108.2	106.8	108.7	101.1
Machinery (except electrical)	94.0	93.8	95.2	94.9	94.7	93.3	93.4	93.2	93.0	93.9	94.9	96.1	97.1	101.0	88.9
Electrical machinery	135.2	130.0	132.8	130.4	128.5	128.6	129.9	130.9	128.6	135.1	131.9	137.1	134.1	132.6	118.9
Transportation equipment	96.1	105.9	107.8	107.2	102.0	100.1	99.3	103.8	111.8	115.0	117.8	113.9	102.4	120.4	111.6
Instruments and related products	113.1	110.4	112.2	110.2	108.7	109.3	109.2	111.5	110.3	116.0	116.4	116.3	118.1	117.1	108.4
Miscellaneous manufacturing	108.9	100.6	104.5	100.4	97.3	96.0	95.8	92.9	95.2	105.1	108.7	107.0	106.4	101.1	92.7
Nondurable goods	94.6	90.6	90.3	87.3	86.4	86.8	86.0	86.0	86.6	90.5	93.0	94.6	95.3	93.0	88.7
Food and kindred products	94.3	86.8	82.9	77.7	75.0	74.4	73.9	75.8	79.2	84.0	91.2	97.4	94.1	83.7	84.2
Tobacco manufactures	77.0	58.8	63.2	60.1	61.3	61.9	66.5	70.8	76.3	76.7	94.8	97.2	76.4	77.1	77.7
Textile-mill products	71.2	69.2	70.5	68.5	66.9	65.9	65.4	64.5	65.8	68.3	68.7	68.5	71.8	74.4	69.2
Apparel and other finished textile products	105.6	99.0	99.6	96.8	98.1	102.0	99.4	95.0	93.3	101.2	101.9	103.1	108.0	105.1	96.8
Paper and allied products	112.3	110.0	111.4	107.8	107.4	106.2	105.6	105.8	105.6	109.4	111.5	112.3	112.6	112.7	108.0
Printing and publishing	114.6	113.9	113.8	113.0	113.2	114.5	113.1	114.2	115.2	118.1	118.6	118.0	118.8	112.8	109.0
Chemicals and allied products	105.9	104.9	105.7	104.6	105.0	103.9	101.9	102.7	102.8	104.6	105.1	105.1	105.1	104.3	99.2
Products of petroleum and coal	77.7	79.8	80.0	78.1	77.7	76.2	75.2	78.4	77.8	78.8	80.7	82.3	82.7	84.1	84.2
Rubber products	98.2	95.7	94.6	92.1	89.4	87.2	87.6	91.6	93.1	94.9	99.0	97.1	98.3	103.5	92.6
Leather and leather products	92.4	89.6	89.9	84.5	82.2	86.6	88.6	88.9	83.8	85.8	84.2	85.0	93.0	92.2	86.6
Payrolls															
Mining	.....	102.7	101.6	97.2	94.5	91.5	94.5	97.7	97.0	97.0	101.6	101.6	104.5	105.0	104.9
Contract construction	.....	267.5	262.5	232.7	211.3	191.6	181.7	193.9	197.1	227.1	258.4	259.4	267.9	216.9	200.8
Manufacturing	172.8	169.4	170.7	164.8	160.3	158.2	157.1	158.5	160.6	166.2	170.5	172.5	169.2	167.2	148.7

[1] For comparability of data with those published in issues prior to August 1958, see footnote 1, table A–2.

For mining and manufacturing, data refer to production and related workers; for contract construction, to construction workers.

[2] Preliminary.

TABLE C–4. Gross and spendable average weekly earnings of production workers in manufacturing, in current and 1947–49 dollars [1]

Item	1961							1960						Annual average	
	July [2]	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	July	1959	1958
Manufacturing															
Gross average weekly earnings:															
Current dollars	$94.00	$94.24	$92.66	$91.57	$90.71	$90.25	$90.25	$89.55	$90.39	$91.31	$91.08	$90.85	$91.14	$89.47	$83.59
1947–49 dollars	73.38	73.86	72.73	71.82	71.15	70.78	70.84	70.24	70.95	71.73	71.83	71.37	71.99	71.81	67.61
Spendable average weekly earnings:															
Worker with no dependents:															
Current dollars	75.93	76.12	74.85	74.00	73.34	72.98	72.98	72.44	73.09	73.80	73.62	73.06	73.67	72.83	68.46
1947–49 dollars	59.27	59.66	58.75	58.04	57.52	57.24	57.28	56.82	57.37	57.97	58.06	57.71	58.19	58.45	55.43
Worker with 3 dependents:															
Current dollars	83.54	83.74	82.44	81.57	80.89	80.53	80.53	79.97	80.64	81.36	81.18	80.61	81.23	80.36	75.88
1947–49 dollars	65.21	65.63	64.71	63.98	63.44	63.16	63.21	62.72	63.30	63.91	64.02	63.67	64.16	64.49	61.44

[1] See footnote 1, table C–3.

Spendable average weekly earnings are obtained by deducting from gross average weekly earnings, Federal social security and income taxes for which the worker is liable. The amount of tax liability depends, of course, on the number of dependents supported by the worker as well as on the level of his gross income. Spendable earnings have been computed for 2 types of income receivers: (1) a worker with no dependents, and (2) a worker with 3 dependents. The primary value of the spendable series is that of measuring relative changes in disposable earnings for 2 types of income receivers.

The computations of spendable earnings for both the worker with no dependents and the worker with 3 dependents are based upon the gross average weekly earnings for *all* production workers in manufacturing without direct regard to marital status, family composition, or other sources of income.

Gross and spendable average weekly earnings expressed in 1947–49 dollars indicate changes in the level of average weekly earnings after adjustment for changes in purchasing power as measured by the Bureau's Consumer Price Index.

[2] Preliminary.

NOTE: For a description of these series, see The Calculation and Uses of the Spendable Earnings Series (in Monthly Labor Review, January 1958, pp. 50–54).

D.—Consumer and Wholesale Prices

TABLE D–1. Consumer Price Index [1]—All-city average: All items, groups, subgroups, and special groups of items

[1947–49=100]

Group	1961								1960					Annual average	
	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1960	1959
All items	128.0	128.1	127.6	127.4	127.5	127.5	127.5	127.4	127.5	127.4	127.3	126.8	126.6	126.5	124.6
Food [2]	121.2	122.0	120.9	120.7	121.2	121.2	121.4	121.3	121.4	121.1	120.9	120.2	120.1	119.7	118.3
Food at home	118.2	119.0	117.8	117.7	118.3	118.3	118.6	118.5	118.7	118.4	118.2	117.4	117.4	116.9	115.9
Cereals and bakery products	139.6	139.4	139.7	139.7	139.7	139.6	139.4	139.1	139.0	138.6	138.5	137.8	137.7	136.8	134.2
Meats, poultry, and fish	108.4	107.8	107.4	108.7	110.5	111.4	111.8	111.6	110.5	109.9	110.0	110.2	111.3	109.3	110.7
Dairy products	118.5	118.0	117.3	117.5	117.9	118.5	119.0	119.1	119.3	118.9	118.4	117.5	116.6	116.8	114.3
Fruits and vegetables	132.4	138.2	135.4	132.2	131.4	127.8	127.2	126.1	126.3	126.2	124.8	124.6	127.3	128.3	125.1
Other foods at home [3]	107.6	107.9	106.0	105.8	106.4	107.6	108.5	109.5	111.6	111.6	112.0	109.3	106.5	106.8	106.1
Housing [4]	132.3	132.4	132.4	132.2	132.3	132.5	132.4	132.3	132.3	132.1	132.2	132.0	131.5	131.5	129.2
Rent	143.6	143.6	143.5	143.4	143.3	143.1	143.1	142.9	142.8	142.7	142.5	142.1	141.9	141.8	139.7
Gas and electricity	125.6	125.6	126.3	126.2	125.8	125.9	125.9	125.9	125.6	125.7	125.7	125.7	124.9	124.8	119.9
Solid and petroleum fuels	136.9	135.9	135.6	136.5	139.9	141.3	141.3	139.6	137.0	136.3	136.1	134.8	133.4	135.6	136.6
Housefurnishings	103.2	103.6	103.9	103.5	103.8	103.9	103.7	103.6	103.9	104.0	104.0	104.1	103.5	104.2	103.9
Household operation	138.8	139.1	138.9	138.7	138.7	138.5	138.3	138.3	138.3	138.3	138.1	138.0	137.6	137.4	134.3
Apparel	109.9	109.9	109.6	109.6	109.5	109.8	109.6	109.4	110.6	110.7	111.0	110.6	109.3	109.4	107.9
Men's and boys'	111.1	111.5	111.4	111.7	111.7	111.4	111.3	111.4	112.0	112.0	112.2	112.2	110.5	110.4	108.4
Women's and girls'	100.2	100.0	99.4	99.3	99.1	99.9	99.5	99.1	101.1	101.4	101.8	101.1	99.7	100.0	99.5
Footwear	141.2	141.0	140.8	140.8	140.8	140.9	140.9	140.8	140.7	140.3	140.5	140.2	139.9	139.9	135.2
Other apparel [5]	92.9	92.9	92.6	92.8	92.8	92.6	92.9	93.0	94.0	94.1	93.9	93.8	93.1	93.3	92.3
Transportation	149.3	148.3	147.7	146.6	145.8	145.7	146.2	146.2	146.5	146.5	146.1	144.7	146.2	146.2	146.3
Private	136.8	135.9	135.3	134.2	133.4	133.4	133.9	134.0	134.5	134.4	134.1	132.8	134.4	134.5	135.2
Public	209.1	208.5	207.3	206.5	206.5	205.7	205.7	205.5	202.9	[6]202.9	[6]201.2	[6]200.3	[6]199.3	[6]199.3	[6]192.7
Medical care	161.4	161.2	160.9	160.4	159.9	159.6	159.4	158.5	158.0	157.9	157.3	156.9	156.7	156.2	150.8
Personal care	134.2	134.3	133.9	133.8	133.8	133.6	133.8	133.7	133.7	133.9	134.0	133.9	133.8	133.3	131.2
Reading and recreation	124.4	124.1	123.5	123.9	124.1	123.4	122.7	122.2	122.3	122.5	121.9	122.1	121.9	121.5	118.6
Other goods and services	133.6	133.6	133.1	133.1	132.6	132.6	132.6	132.6	132.7	132.7	132.7	132.7	132.4	132.2	129.7
Special groups:															
All items less food	131.6	131.4	131.2	131.0	130.8	130.9	130.8	130.6	130.8	130.8	130.7	130.3	130.1	130.0	127.9
All items less shelter	125.6	125.7	125.2	124.9	125.0	125.0	125.0	124.8	125.0	125.0	124.8	124.3	124.1	124.0	122.2
All commodities less food	116.1	116.0	115.6	115.3	115.2	115.4	115.5	115.4	115.9	115.9	115.9	115.6	115.5	115.7	115.1
All commodities	118.4	118.7	118.0	117.7	117.9	118.0	118.1	118.0	118.4	118.3	118.2	117.7	117.6	117.5	116.6
Nondurables [7]	120.8	121.1	120.4	120.2	120.4	120.7	120.8	120.7	121.0	120.9	120.7	120.3	119.9	119.6	118.1
Nondurables less food	120.7	120.6	120.3	120.0	120.0	120.7	120.6	120.5	121.0	121.1	120.9	120.9	120.1	120.1	118.3
Nondurables less food and apparel	130.0	129.9	129.5	129.0	129.0	130.0	130.1	130.0	130.0	130.0	129.5	129.8	129.4	129.2	127.3
Durables [8]	111.9	111.5	111.2	110.8	110.7	109.9	110.3	110.2	110.8	110.7	110.9	110.0	111.0	111.6	113.0
Durables less cars	102.1	102.1	101.8	101.8	101.9	102.0	102.1	102.4	102.8	102.8	102.8	103.0	103.0	103.2	103.3
All services [9]	153.0	152.8	152.7	152.5	152.3	152.2	151.9	151.7	151.4	151.3	151.2	150.8	150.3	150.0	145.8
All services less rent	155.4	155.2	155.0	154.9	154.7	154.6	154.2	154.0	153.6	153.6	153.4	153.0	152.5	152.1	147.5
Household operation services, gas, and electricity	140.6	140.7	140.8	140.7	140.5	140.4	140.2	140.1	140.0	140.1	140.1	139.8	139.2	139.0	134.8
Transportation services	189.8	189.4	189.3	188.8	188.5	188.2	187.7	187.6	186.8	187.0	186.3	185.8	185.2	184.9	180.3
Medical care services	169.5	169.3	168.8	168.2	167.7	167.3	167.1	165.9	165.3	165.1	164.3	163.6	163.3	162.8	156.3
Other services	137.9	137.7	137.6	137.6	137.5	137.6	137.1	137.2	136.8	136.7	136.8	136.5	136.0	135.6	131.7

[1] The Consumer Price Index measures the average change in prices of goods and services purchased by urban wage-earner and clerical-worker families. Data for 46 large, medium-size, and small cities are combined for the all-city average.

[2] In addition to subgroups shown here, total food includes restaurant meals and other food bought and eaten away from home.

[3] Includes eggs, fats and oils, sugar and sweets, beverages (nonalcoholic), and other miscellaneous foods.

[4] In addition to subgroups shown here, total housing includes the purchase price of homes and other homeowner costs.

[5] Includes yard goods, diapers, and miscellaneous items.

[6] Revised.

[7] Includes food, house paint, solid fuels, fuel oil, textile housefurnishings, household paper, electric light bulbs, laundry soap and detergents, apparel (except shoe repairs), gasoline, motor oil, prescriptions and drugs, toilet goods, nondurable toys, newspapers, cigarettes, cigars, beer, and whiskey.

[8] Includes water heaters, central heating furnaces, kitchen sinks, sink faucets, porch flooring, household appliances, furniture and bedding, floor coverings, dinnerware, automobiles, tires, radio and television sets, durable toys, and sporting goods.

[9] Includes rent, home purchase, real estate taxes, mortgage interest, property insurance, repainting garage, repainting rooms, reshingling roof, refinishing floors, gas, electricity, dry cleaning, laundry service, domestic service, telephone, water, postage, shoe repairs, auto repairs, auto insurance, auto registration, transit fares, railroad fares, professional medical services, hospital services, hospitalization and surgical insurance, barber and beauty shop services, television repairs, and motion picture admissions.

TABLE D–2. Consumer Price Index [1]—All items and food indexes, by city

[1947–49=100]

City	1961								1960					Annual average	
	Aug.	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1960	1959
	All items														
All-city average [2]	128.0	128.1	127.6	127.4	127.5	127.5	127.5	127.4	127.5	127.4	127.3	126.8	126.6	126.5	124.6
Atlanta, Ga.	(3)	(3)	127.4	(3)	(3)	127.7	(3)	(3)	127.7	(3)	(3)	127.9	(3)	127.2	125.4
Baltimore, Md.	(3)	(3)	129.8	(3)	(3)	129.5	(3)	(3)	129.3	(3)	(3)	128.7	(3)	128.3	126.8
Boston, Mass.	(3)	130.4	(3)	(3)	130.0	(3)	(3)	129.3	(3)	(3)	129.1	(3)	(3)	128.4	126.8
Chicago, Ill.	130.8	130.9	129.7	129.9	130.1	130.2	130.5	130.4	130.6	130.5	130.7	130.4	130.3	129.9	128.1
Cincinnati, Ohio	(3)	(3)	124.6	(3)	(3)	124.8	(3)	(3)	125.0	(3)	(3)	124.8	(3)	124.4	123.1
Cleveland, Ohio	128.7	(3)	(3)	127.9	(3)	(3)	128.3	(3)	(3)	127.9	(3)	(3)	127.4	127.1	125.6
Detroit, Mich.	125.8	125.5	125.8	125.6	125.6	125.8	126.4	126.3	125.8	125.7	125.7	125.4	125.6	124.9	123.8
Houston, Tex.	126.3	(3)	(3)	126.1	(3)	(3)	125.1	(3)	(3)	126.4	(3)	(3)	126.1	125.8	124.6
Kansas City, Mo.	(3)	129.8	(3)	(3)	129.5	(3)	(3)	127.6	(3)	(3)	128.2	(3)	(3)	127.5	125.9
Los Angeles, Calif.	131.1	131.4	131.4	131.0	131.1	130.9	131.4	131.2	131.0	130.6	130.3	129.8	129.2	129.8	127.4
Minneapolis, Minn.	(3)	129.2	(3)	(3)	129.0	(3)	(3)	127.8	(3)	(3)	128.5	(3)	(3)	127.5	125.6
New York, N.Y.	126.4	126.4	125.8	125.6	125.8	126.1	126.2	126.1	126.3	126.5	126.1	125.5	125.3	125.2	122.8
Philadelphia, Pa.	128.0	128.3	127.8	127.9	128.0	127.7	127.9	127.8	128.0	127.9	127.7	127.2	126.8	126.7	124.5
Pittsburgh, Pa.	(3)	129.6	(3)	(3)	129.2	(3)	(3)	129.2	(3)	(3)	129.0	(3)	(3)	128.3	125.5
Portland, Oreg.	(3)	129.3	(3)	(3)	128.3	(3)	(3)	128.8	(3)	(3)	127.2	(3)	(3)	127.5	125.7
St. Louis, Mo.	(3)	(3)	129.0	(3)	(3)	128.9	(3)	(3)	127.9	(3)	(3)	127.4	(3)	127.1	126.3
San Francisco, Calif.	(3)	(3)	133.8	(3)	(3)	133.8	(3)	(3)	133.9	(3)	(3)	133.0	(3)	132.6	130.0
Scranton, Pa.	124.3	(3)	(3)	124.1	(3)	(3)	123.5	(3)	(3)	123.9	(3)	(3)	121.8	122.3	120.8
Seattle, Wash.	131.8	(3)	(3)	131.7	(3)	(3)	130.8	(3)	(3)	130.5	(3)	(3)	129.8	129.8	128.2
Washington, D.C.	125.2	(3)	(3)	124.3	(3)	(3)	124.5	(3)	(3)	123.8	(3)	(3)	123.2	123.0	121.7
	Food														
All-city average [2]	121.2	122.0	120.9	120.7	121.2	121.2	121.4	121.3	121.4	121.1	120.9	120.2	120.1	119.7	118.3
Atlanta, Ga.	118.5	118.9	116.6	116.2	117.0	117.4	117.9	118.1	118.2	118.7	118.7	118.2	118.1	117.0	115.7
Baltimore, Md.	122.3	122.9	121.7	120.8	121.2	121.0	120.9	121.0	121.2	120.7	121.0	120.1	120.7	119.8	118.0
Boston, Mass.	121.4	122.0	119.6	119.8	120.5	120.3	121.0	120.5	121.0	120.5	120.3	120.4	119.9	119.4	118.7
Chicago, Ill.	119.5	120.1	118.4	118.6	118.8	118.7	119.3	119.2	119.1	118.7	118.6	118.1	118.4	117.5	115.8
Cincinnati, Ohio	122.0	123.2	121.1	121.5	121.7	121.5	122.1	122.4	122.2	121.9	122.6	121.3	120.8	120.5	118.8
Cleveland, Ohio	116.6	116.9	116.0	115.7	116.3	115.9	116.9	116.8	116.8	117.1	117.0	116.2	116.7	115.8	114.1
Detroit, Mich.	120.7	121.8	121.0	121.1	121.3	121.1	121.3	120.9	120.1	119.4	119.6	118.9	120.0	118.7	117.5
Houston, Tex.	117.0	116.3	115.8	116.1	116.7	116.0	116.3	116.2	116.2	116.5	116.2	115.8	115.8	115.0	114.7
Kansas City, Mo.	115.0	116.2	115.5	114.7	115.3	115.5	115.9	114.6	114.8	114.5	113.9	113.1	112.9	112.9	112.2
Los Angeles, Calif.	125.3	126.0	126.6	127.5	128.3	128.1	128.2	128.4	128.1	127.3	127.0	126.5	125.5	126.1	123.5
Minneapolis, Minn.	117.5	119.2	118.7	118.6	118.6	119.0	119.2	119.4	119.7	119.2	119.7	118.6	118.7	118.4	118.0
New York, N.Y.	122.2	122.6	121.2	121.0	121.6	122.5	122.8	122.7	122.8	123.6	123.2	122.5	122.5	122.0	120.3
Philadelphia, Pa.	123.4	124.3	122.4	122.6	123.0	123.3	123.8	123.5	123.9	123.9	124.0	123.1	123.0	122.1	120.9
Pittsburgh, Pa.	122.9	123.6	122.6	121.8	122.4	122.6	123.2	123.0	122.2	122.4	122.6	121.9	121.0	121.2	119.8
Portland, Oreg.	123.7	123.5	122.9	122.5	123.7	122.7	122.0	122.4	122.2	121.4	121.3	121.1	120.4	121.0	120.7
St. Louis, Mo.	121.0	121.3	121.7	121.5	121.7	121.4	121.3	121.3	121.8	120.7	120.2	118.9	119.6	119.0	118.7
San Francisco, Calif.	125.0	126.1	126.2	126.2	126.2	126.6	126.5	126.1	126.2	125.5	125.0	125.2	124.0	124.4	122.6
Scranton, Pa.	116.7	118.5	116.9	116.7	116.9	117.7	117.7	117.1	117.4	117.0	117.0	115.9	114.8	115.5	115.4
Seattle, Wash.	124.9	125.6	125.6	125.4	125.4	124.7	124.7	124.4	124.6	123.4	123.3	123.2	123.1	122.7	120.8
Washington, D.C.	121.9	122.2	121.2	120.7	121.4	121.3	121.1	121.4	121.7	121.2	121.6	120.8	120.1	120.0	119.0

[1] See footnote 1, table D–1. Indexes measure time-to-time changes in prices of goods and services purchased by urban wage-earner and clerical-worker families. They do not indicate whether it costs more to live in one city than in another.

[2] Average of 46 cities.

[3] All items indexes are computed monthly for 5 cities and once every 3 months on a rotating cycle for 15 other cities.

TABLE D–3. Indexes of wholesale prices,[1] by group and subgroup of commodities

[1947–49=100, unless otherwise specified]

Commodity group	1961								1960					Annual average	
	Aug.[2]	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1960[3]	1959
All commodities	119.0	118.6	118.2	118.7	119.4	119.9	120.0	119.9	119.5	119.6	119.6	119.2	119.2	119.6	119.5
Farm products and processed foods	98.7	[3]97.5	96.2	97.4	98.8	100.0	100.5	100.0	99.2	99.7	99.5	98.1	97.4	98.5	98.2
Farm products	88.8	[3]87.1	85.1	86.8	88.5	89.9	90.0	89.7	88.7	89.9	89.5	87.7	86.6	88.8	89.1
Fresh and dried fruits and vegetables	97.7	[3]104.3	103.3	101.4	100.2	105.9	99.8	103.7	99.5	107.5	109.2	104.7	98.7	106.7	102.7
Grains	78.1	77.8	74.2	74.8	73.8	76.4	76.0	75.2	72.7	70.3	73.5	74.9	74.3	75.7	77.3
Livestock and live poultry	80.3	75.5	75.4	78.2	82.0	83.1	85.3	84.7	82.8	81.8	80.7	79.0	80.7	82.6	85.1
Plant and animal fibers	98.4	96.7	96.2	95.2	93.4	92.8	91.2	90.7	90.7	90.8	90.8	92.1	92.2	94.2	98.2
Fluid milk	99.1	[3]98.1	94.9	95.6	97.0	98.7	99.6	101.1	102.3	102.3	101.5	99.8	97.0	98.0	94.4
Eggs	80.7	75.5	63.3	53.3	66.5	75.7	81.2	75.2	87.7	108.1	98.9	85.5	76.4	77.3	65.6
Hay, hayseeds, and oilseeds	82.9	[3]83.7	83.6	92.1	96.4	87.5	81.3	79.5	74.1	72.5	72.2	72.3	73.7	74.7	76.6
Other farm products	129.3	129.3	129.0	129.5	129.4	129.6	129.6	128.3	130.4	129.1	130.4	129.5	125.6	128.5	132.6
Processed foods	108.2	107.5	106.7	107.5	108.7	109.6	110.5	109.9	109.2	109.1	109.0	108.1	107.8	107.7	107.0
Cereal and bakery products	124.0	[3]123.9	123.7	123.6	123.6	123.6	123.6	123.5	123.5	123.1	123.1	122.4	122.0	121.8	119.3
Meats, poultry, and fish	94.8	92.5	89.9	91.8	94.3	96.1	99.5	98.3	97.3	96.6	97.8	96.0	96.8	96.7	98.2
Dairy products and ice cream	121.3	120.4	119.7	119.5	119.9	120.7	119.8	121.3	122.0	121.7	121.3	120.5	118.0	118.5	114.3
Canned and frozen fruits and vegetables	107.7	[3]109.0	108.7	109.0	111.1	111.5	112.0	111.8	110.1	109.4	108.8	107.7	106.6	107.0	109.0
Sugar and confectionery	113.0	114.8	116.3	115.8	114.9	115.1	115.8	116.2	116.3	117.4	117.1	117.9	116.9	115.5	115.1
Packaged beverage materials	138.6	139.1	139.1	139.1	139.1	139.1	139.1	139.1	140.9	140.9	140.9	140.9	140.9	143.3	146.5
Animal fats and oils	59.6	[3]57.6	57.2	65.0	72.2	76.8	77.4	65.0	62.4	66.1	62.0	60.0	66.0	58.4	54.6
Crude vegetable oils	59.9	[3]59.6	61.9	66.9	60.4	66.7	63.2	57.1	52.4	53.1	49.9	48.7	51.6	49.1	53.1
Refined vegetable oils	68.3	67.7	68.0	71.8	71.9	70.5	67.5	64.4	61.2	59.8	57.4	55.2	56.8	56.7	58.0
Vegetable oil end products	82.4	83.8	84.8	85.9	85.0	84.4	80.4	77.9	77.4	76.1	75.2	74.7	73.3	73.2	74.0
Other processed foods	102.1	102.5	103.1	102.6	102.4	103.3	102.2	102.5	100.8	102.8	100.5	101.4	101.7	102.2	96.7
All commodities except farm products	124.0	123.9	123.8	124.0	124.6	124.9	125.0	124.9	124.6	124.6	124.6	124.4	124.6	124.7	124.5
All commodities except farm and foods	127.4	127.4	127.4	127.6	128.0	128.2	128.1	128.1	127.9	127.9	128.0	127.9	128.2	128.3	128.2
Textile products and apparel	94.2	[3]93.9	93.7	94.0	94.1	94.4	94.7	94.8	95.2	95.4	95.8	95.9	96.1	96.1	95.0
Cotton products	90.4	89.7	89.5	89.9	89.9	90.2	90.2	90.8	91.2	91.7	92.8	93.4	94.3	94.2	91.7
Wool products	101.6	101.2	101.0	100.9	100.1	99.5	99.9	100.1	100.8	101.3	101.1	101.2	101.5	102.1	101.6
Manmade fiber textile products	75.1	75.1	75.1	75.4	75.8	76.3	77.2	77.3	77.8	78.2	78.5	78.6	78.9	79.1	81.1
Silk products	136.2	131.2	130.8	131.5	129.5	129.5	129.3	130.9	125.7	125.9	128.5	128.4	126.8	122.9	113.5
Apparel	100.5	100.4	100.4	100.3	100.4	100.4	100.5	100.5	101.0	101.0	101.1	101.1	101.0	100.9	100.0
Other textile products	91.0	90.7	85.7	92.8	93.6	100.3	101.3	99.2	92.6	92.1	91.3	85.7	84.6	85.2	76.8
Hides, skins, leather, and leather products	113.1	[3]111.1	110.1	110.7	109.9	109.5	108.0	108.3	108.8	108.5	108.5	108.1	108.7	110.3	114.3
Hides and skins	82.9	76.2	68.1	71.0	68.0	68.8	60.5	61.7	64.9	65.8	64.1	62.3	63.6	68.1	90.7
Leather	106.3	102.6	102.6	104.1	102.2	100.2	97.3	97.8	99.4	97.1	98.1	97.5	98.9	101.5	111.8
Footwear	133.5	132.9	132.8	132.8	132.7	132.7	132.7	132.7	132.5	132.5	132.5	132.5	132.5	133.0	129.5
Other leather products	105.0	[3]104.3	104.5	104.6	104.3	103.6	103.9	104.2	103.9	104.2	104.0	103.9	104.7	105.8	109.0
Fuel and related products, and power[4]	114.4	114.6	114.3	113.6	115.2	117.5	117.7	117.2	116.2	116.1	116.2	116.1	115.3	113.8	112.7
Coal	119.2	118.7	117.7	117.4	119.6	122.8	123.4	123.4	123.1	123.0	122.5	122.4	121.3	121.8	122.6
Coke	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	170.4	169.8
Gas fuels[4]	116.7	115.6	115.4	118.7	118.3	121.8	122.3	121.1	120.0	120.2	120.9	121.3	116.6	116.6	110.9
Electric power[4]	102.4	102.5	102.3	102.4	102.5	102.4	102.2	102.3	102.3	102.4	102.1	102.1	102.1	101.9	100.8
Crude petroleum and natural gasoline	127.2	127.2	127.2	127.2	127.2	126.8	126.8	126.8	126.8	126.8	126.8	126.8	126.8	126.8	127.4
Petroleum products, refined	116.8	117.4	117.0	115.0	117.9	121.5	121.9	121.1	119.3	119.1	119.5	119.2	118.3	115.4	114.2
Chemicals and allied products	108.7	108.9	109.3	109.9	110.2	110.1	110.0	109.7	110.2	110.1	110.1	110.4	110.5	110.2	109.9
Industrial chemicals	120.8	121.1	122.2	122.8	123.2	123.2	123.2	123.0	123.6	123.5	123.6	124.5	124.6	124.2	123.8
Prepared paint	132.4	132.4	132.4	132.4	132.4	132.4	132.4	131.7	130.3	128.4	128.4	128.4	128.4	128.5	128.3
Paint materials	101.1	101.0	101.0	101.5	103.5	104.6	104.1	104.8	104.4	104.8	104.5	104.6	105.0	103.8	101.9
Drugs and pharmaceuticals	92.5	92.5	92.4	92.4	92.6	92.6	92.7	92.7	92.8	92.8	93.1	93.7	94.3	93.6	93.2
Fats and oils, inedible	51.1	[3]52.2	54.1	61.4	62.1	57.7	54.7	50.2	48.5	48.9	47.8	47.7	48.9	49.0	56.7
Mixed fertilizer	113.6	113.0	112.3	112.3	112.3	112.3	111.9	111.6	111.8	112.1	112.9	112.9	112.3	111.0	109.5
Fertilizer materials	110.0	111.7	112.3	112.3	112.3	112.3	112.4	112.4	111.9	111.9	111.2	108.3	108.2	109.6	106.9
Other chemicals and allied products	105.8	105.8	105.8	105.8	105.6	105.6	105.7	105.6	107.2	107.4	107.3	106.7	106.7	106.7	106.6
Rubber and rubber products	139.4	[3]139.0	139.6	140.2	140.1	139.9	139.6	139.7	141.2	143.6	144.7	144.9	145.3	144.7	144.5
Crude rubber	137.9	136.2	137.4	140.8	138.2	138.0	136.2	135.7	136.5	140.3	146.5	147.7	151.4	155.7	152.0
Tires and tubes	138.3	[3]138.3	138.5	138.4	138.4	137.1	137.1	137.2	137.1	141.3	141.3	141.3	141.3	138.4	143.4
Other rubber products	141.1	140.9	141.6	141.6	142.5	143.3	143.3	143.6	146.8	146.8	146.8	146.6	145.9	145.6	142.2
Lumber and wood products	116.0	[3]117.2	117.8	117.6	118.0	115.4	114.7	115.7	116.5	116.9	117.7	118.7	119.6	121.3	125.8
Lumber	115.8	116.8	117.0	117.0	116.5	114.4	113.5	114.5	115.0	115.1	116.3	117.9	119.2	121.4	127.1
Millwork	130.7	[3]132.0	134.0	133.4	134.8	134.7	134.9	135.8	135.5	135.8	135.3	135.5	136.7	136.6	135.9
Plywood	95.5	97.2	97.2	97.2	99.1	92.0	90.8	91.7	95.1	96.1	97.1	96.4	94.7	96.1	101.2
Pulp, paper, and allied products	126.3	126.4	126.5	126.1	131.0	131.5	132.2	132.2	132.3	133.1	133.4	133.0	133.0	133.2	132.2
Woodpulp	114.4	114.4	114.4	114.4	114.4	114.5	114.5	114.5	114.5	121.2	121.2	121.2	121.2	120.6	121.2
Wastepaper	76.6	76.6	65.0	62.1	62.1	62.1	72.4	67.8	67.8	77.4	77.4	77.4	77.4	83.7	112.5
Paper	145.9	145.9	145.9	145.4	145.4	145.7	145.7	145.7	145.7	145.7	145.7	145.4	145.2	145.4	143.4
Paperboard	122.8	123.0	128.9	128.9	129.1	129.9	130.1	132.4	132.4	132.4	135.9	135.9	135.9	135.3	136.1
Converted paper and paperboard products	121.2	121.2	121.2	120.9	129.7	130.3	130.9	130.9	131.1	131.1	131.1	130.6	130.5	130.6	127.5
Building paper and board	144.8	144.9	144.9	144.6	145.3	145.8	146.0	145.6	145.4	145.4	145.7	145.3	145.5	145.7	146.4

See footnotes at end of table.

TABLE D–3. Indexes of wholesale prices,[1] by group and subgroup of commodities—Continued

[1947–49=100, unless otherwise specified]

Commodity group	1961								1960					Annual average	
	Aug.[2]	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1960[3]	1959
All commodities except farm and foods—Con.															
Metals and metal products	153.6	[3]153.2	153.1	153.0	152.7	152.4	152.3	152.2	152.2	152.3	152.8	153.5	153.6	153.8	153.6
Iron and steel	170.5	170.1	170.3	170.2	170.8	170.4	169.7	169.4	168.6	168.5	168.9	169.7	169.9	170.0	172.0
Nonferrous metals	136.1	135.8	135.2	134.4	132.4	132.3	132.2	132.1	133.9	135.5	137.1	138.4	138.7	139.0	136.1
Metal containers	156.6	156.6	156.6	156.6	156.6	156.6	156.6	156.6	153.6	153.6	153.6	153.6	153.6	153.9	153.7
Hardware	176.4	176.3	176.3	176.3	175.2	175.0	175.1	174.9	174.7	174.6	174.6	174.5	174.5	174.3	173.0
Plumbing fixtures and brass fittings	133.5	132.8	132.2	131.3	130.9	130.9	130.9	130.9	130.8	130.8	130.8	131.5	131.5	132.1	130.1
Heating equipment	115.6	115.5	115.4	115.4	115.2	114.8	114.8	114.9	116.8	118.4	119.3	119.3	118.8	119.4	121.7
Fabricated structural metal products	132.4	[3]132.3	132.1	132.4	132.8	132.8	133.5	133.6	133.9	133.9	134.0	134.2	134.7	134.7	133.4
Fabricated nonstructural metal products	150.4	[3]149.2	149.6	150.0	150.1	149.6	149.6	149.6	148.6	146.7	146.2	146.2	146.2	146.4	146.0
Machinery and motive products	152.7	[3]153.0	153.2	153.1	153.1	153.4	153.4	153.5	153.1	153.0	152.9	151.4	153.3	153.4	153.0
Agricultural machinery and equipment	148.9	[3]148.8	148.8	148.6	148.6	148.5	148.5	148.4	148.0	148.2	146.7	146.2	146.1	146.1	143.4
Construction machinery and equipment	178.4	[3]178.3	178.2	178.5	178.6	178.2	178.2	177.6	177.0	177.3	176.7	176.7	176.7	175.6	171.9
Metalworking machinery and equipment	181.7	181.7	181.5	181.7	181.8	183.3	182.7	182.7	182.3	182.1	181.2	181.0	180.1	179.9	174.5
General purpose machinery and equipment	166.4	[3]166.5	166.5	166.3	166.2	166.1	166.2	166.1	166.1	166.3	166.5	166.9	166.4	167.1	165.3
Miscellaneous machinery	151.9	151.8	151.4	151.4	151.4	151.2	151.2	151.3	150.9	150.7	150.4	150.2	150.2	150.2	149.4
Special industry machinery and equipment [4]	100.5	100.5	100.5	100.4	100.3	100.1	100.0	100.0	100.1	(5)	(5)	(5)	(5)	(5)	(5)
Electrical machinery and equipment	150.5	[3]151.6	[3]151.7	[3]151.7	[3]151.9	153.5	153.6	153.7	152.4	152.4	152.6	152.7	153.3	154.2	154.4
Motor vehicles	140.5	[3]140.5	[3]140.4	140.3	140.3	140.2	140.4	140.8	140.7	140.5	140.3	135.4	141.6	140.8	142.8
Transportation equipment, railroad rolling stock [4]	100.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(5)	(5)	(5)	(5)	(5)	(5)
Furniture and other household durables	122.3	122.3	122.4	122.4	122.5	122.2	122.2	122.3	122.6	122.6	122.7	122.8	122.9	123.1	123.4
Household furniture	126.4	126.4	126.4	126.4	126.3	126.2	126.2	126.1	125.7	125.7	125.6	125.0	125.0	125.1	124.1
Commercial furniture	155.9	155.9	155.9	155.9	155.9	155.9	155.9	155.9	157.1	157.1	157.1	157.1	157.1	156.8	155.2
Floor coverings	129.7	[3]129.7	128.6	128.6	128.6	128.6	128.6	128.7	130.2	130.2	130.5	130.5	130.6	130.4	128.1
Household appliances	99.8	[3]99.8	99.8	99.9	100.0	100.0	100.2	100.2	100.4	100.6	100.9	100.9	101.1	101.9	104.7
Television, radio receivers, and phonographs	90.0	90.0	90.0	89.8	90.7	90.7	90.5	90.9	91.2	90.5	90.5	91.1	91.1	91.3	92.8
Other household durable goods	157.0	[3]156.9	157.8	157.8	157.8	156.0	156.0	156.2	156.6	156.6	156.8	157.6	157.6	157.4	156.4
Nonmetallic mineral products [7]	138.5	138.4	138.3	138.5	138.6	138.6	138.4	138.5	137.9	137.9	138.1	138.0	137.8	138.0	137.7
Flat glass	130.3	130.3	130.3	132.4	132.4	132.4	132.4	132.4	132.4	132.4	132.4	132.4	130.2	132.7	135.3
Concrete ingredients	142.4	142.6	142.6	142.6	142.6	142.6	142.3	142.2	142.0	142.1	142.1	142.2	142.2	142.1	140.3
Concrete products	131.2	131.3	131.3	131.3	131.3	131.1	131.2	131.1	131.0	131.0	131.0	131.0	131.1	131.1	129.7
Structural clay products	161.7	161.6	161.6	161.5	162.1	162.1	162.1	162.1	162.3	162.3	162.2	162.1	162.0	161.8	160.2
Gypsum products	137.3	134.6	134.6	134.6	134.6	134.6	134.6	134.6	133.2	133.2	133.2	133.2	133.2	133.2	133.1
Prepared asphalt roofing	114.2	114.2	112.9	112.9	114.2	114.2	114.2	114.2	106.6	106.6	106.6	106.6	106.6	107.3	116.4
Other nonmetallic minerals	133.7	133.7	133.7	133.7	133.7	133.6	132.9	133.5	133.6	133.6	135.0	134.5	134.6	134.2	132.4
Tobacco products and bottled beverages	132.8	132.6	132.1	132.1	132.0	132.1	132.1	132.1	132.1	132.0	132.0	132.0	132.0	131.8	131.4
Tobacco products	130.9	130.9	130.9	130.9	130.8	130.8	130.8	130.8	130.8	130.8	130.8	130.8	130.8	130.8	130.5
Alcoholic beverages	121.1	121.1	121.2	121.2	121.1	121.3	121.3	121.2	121.2	121.1	121.1	121.1	121.1	120.8	121.3
Nonalcoholic beverages	176.3	[3]174.8	171.6	171.6	171.6	171.6	171.6	171.6	171.6	171.4	171.4	171.4	171.4	171.3	167.4
Miscellaneous products	95.6	95.6	95.9	99.5	97.7	96.8	95.2	95.6	92.4	90.6	90.3	91.1	89.9	92.1	94.5
Toys, sporting goods, small arms, ammunition	119.7	119.0	118.9	118.9	119.0	118.9	118.3	118.4	118.6	118.6	118.6	118.6	118.5	118.3	117.5
Manufactured animal feeds	74.3	74.6	75.0	80.3	77.5	76.2	74.1	74.6	70.0	66.8	66.2	67.7	68.6	69.6	75.1
Notions and accessories	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	97.3	96.9	97.3
Jewelry, watches, and photographic equipment	111.6	[3]111.0	111.0	111.0	111.2	111.3	111.3	111.2	111.0	110.9	110.9	110.9	110.9	110.7	108.3
Other miscellaneous products	132.6	131.8	132.2	131.8	131.7	132.3	132.8	132.8	132.4	132.1	132.6	132.5	132.3	132.2	132.2

[1] As of January 1961, new weights reflecting 1958 values were introduced into the index. Technical details furnished upon request to the Bureau.
[2] Preliminary.
[3] Revised.
[4] Formerly titled Fuel, power, and lighting materials.
[5] January 1958=100.
[6] New series. January 1961=100.
[7] Formerly titled Nonmetallic minerals—structural.

TABLE D–4. Indexes of wholesale prices for special commodity groupings [1]

[1947–49=100]

Commodity group	1961							1960					Annual average	
	Aug.[2]	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1960[3]	1959
All foods	105.9	[3]105.6	[3]104.2	104.7	105.8	107.5	108.0	107.5	107.3	108.8	108.5	106.6	105.4	108.0	104.4
All fish	137.1	129.2	129.5	128.6	126.2	132.0	133.3	131.3	133.2	131.5	129.4	128.1	124.4	128.7	124.5
All commodities except farm products	124.0	123.9	123.8	124.0	124.6	124.9	125.0	124.9	124.6	124.6	124.6	124.4	124.6	124.7	124.5
Textile products, excluding hard fiber products	88.6	88.1	88.1	88.4	88.4	88.7	89.2	89.5	90.0	90.5	91.2	91.6	92.2	92.2	91.4
Refined petroleum products															
East Coast petroleum products, refined	114.6	113.4	113.4	113.4	114.8	116.1	116.6	114.3	111.4	111.4	112.4	111.4	111.0	111.0	108.9
Midcontinent petroleum products, refined	115.0	121.7	121.7	116.0	124.2	125.3	126.0	126.0	125.2	124.7	124.7	124.7	123.2	117.0	115.7
Gulf Coast petroleum products, refined	122.2	121.3	119.8	119.8	122.1	127.3	127.3	125.6	122.9	122.9	122.9	122.9	122.9	120.4	118.4
Pacific Coast petroleum products, refined	110.1	107.0	107.9	109.1	104.3	105.5	106.1	107.3	105.5	105.5	107.3	106.0	104.1	105.8	108.2
Midwest petroleum products, refined[4]	92.6	93.9	93.9	88.7	93.5	99.3	99.9	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Bituminous coal—domestic sizes	121.7	120.1	118.3	117.3	117.7	126.4	127.9	127.9	127.7	127.4	126.2	126.1	124.4	124.7	124.9
Soaps	111.1	111.1	111.1	111.0	108.9	108.9	108.8	108.9	107.6	107.6	107.6	107.6	107.6	107.6	109.5
Synthetic detergents	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.9	102.9	103.6	101.2	101.2	101.7	101.4
Pharmaceutical preparations	102.3	102.2	102.1	102.1	102.0	102.0	102.2	102.1	102.1	102.1	102.1	103.0	104.0	103.3	103.0
Ethical preparations[4]	100.2	100.1	99.9	99.9	99.9	99.9	100.1	100.0	100.1	(4)	(4)	(4)	(4)	(4)	(4)
Anti-infectives[4]	98.9	98.9	99.0	99.0	99.0	99.0	100.0	100.0	100.1	(4)	(4)	(4)	(4)	(4)	(4)
Anti-arthritics[4]	100.6	100.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Sedatives and hypnotics[4]	101.9	101.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Ataractics[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Anti-spasmodics and anti-cholinergics[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Cardiovasculars and anti-hypertensives[4]	100.9	100.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Diabetics[4]	103.8	103.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Hormones[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Diuretics[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Dermatologicals[4]	100.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Hematinics[4]	108.5	108.5	104.5	104.5	104.5	104.5	104.5	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Analgesics[4]	101.8	101.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Anti-obesity preparations[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Cough and cold preparations[4]	98.8	98.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Vitamins[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.4	(4)	(4)	(4)	(4)	(4)	(4)
Proprietary preparations[4]	100.1	100.1	100.2	100.2	100.0	100.0	100.0	100.0	99.8	(4)	(4)	(4)	(4)	(4)	(4)
Vitamins[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Cough and cold preparations[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Laxatives and elimination aids[4]	99.5	99.5	100.5	100.5	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Internal analgesics[4]	100.6	100.6	100.3	100.3	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Tonics and alteratives[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	97.8	(4)	(4)	(4)	(4)	(4)	(4)
External analgesics[4]	99.7	99.7	100.0	100.0	100.0	100.0	100.0	100.0	98.3	(4)	(4)	(4)	(4)	(4)	(4)
Antiseptics[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Antacids[4]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	(4)	(4)	(4)	(4)	(4)	(4)
Lumber and wood products (excluding millwork)	114.1	115.3	115.4	115.4	115.6	112.1	111.1	112.1	113.3	113.7	114.8	116.0	116.8	118.9	124.5
Softwood lumber	115.0	[3]115.9	116.1	116.1	115.6	113.0	111.6	112.4	112.7	112.8	114.1	116.0	117.6	120.4	128.1
Pulp, paper, and products (excluding building paper)	125.8	125.8	126.0	125.6	130.6	131.1	131.8	131.9	132.0	132.8	133.1	132.7	132.7	132.9	131.8
Special metals and metal products	150.4	[3]150.1	150.1	149.9	149.7	149.5	149.5	149.5	149.5	149.5	149.7	148.7	150.6	150.5	150.8
Steel mill products	187.0	187.0	187.0	187.5	187.5	187.6	187.6	187.6	187.6	187.6	187.6	187.6	187.6	187.9	188.2
Machinery and equipment	159.1	[3]159.6	[3]159.5	[3]159.5	[3]159.6	160.3	160.2	160.2	159.6	159.6	159.4	159.5	159.5	160.0	158.5
Agricultural machinery (including tractors)	150.8	150.8	150.8	150.5	150.5	150.5	150.4	150.4	150.0	150.3	148.6	148.0	147.8	147.9	144.8
Metalworking machinery	190.0	189.9	189.5	189.5	189.5	189.2	189.9	189.9	189.6	189.3	188.0	187.7	186.5	186.7	181.8
Total tractors	159.3	[3]159.1	159.0	159.2	159.2	159.2	159.2	159.1	158.9	158.9	157.4	156.9	156.9	156.4	153.3
Industrial valves	201.9	202.3	202.5	202.5	202.5	202.1	201.1	201.6	201.2	201.2	202.8	206.5	206.5	205.1	196.9
Industrial fittings	121.7	121.7	121.7	121.7	121.7	121.7	122.0	121.4	121.7	121.7	122.4	122.5	121.9	132.2	139.0
Antifriction bearings and components	130.5	130.6	130.6	130.6	130.6	130.6	131.4	131.4	131.4	132.9	132.9	132.9	132.9	133.6	136.1
Abrasive grinding wheels	146.9	146.9	146.9	146.9	146.9	146.9	146.9	146.9	146.9	147.6	147.6	147.6	147.6	147.5	152.5
Construction materials	130.2	130.5	130.5	130.6	130.7	129.9	129.8	130.1	130.0	130.3	130.5	131.1	131.4	132.6	134.6

[1] See footnote 1, table D–3.
[2] Preliminary.
[3] Revised
[4] New series. January 1961=100.

TABLE D–5. Indexes of wholesale prices,[1] by stage of processing and durability of product

[1947–49=100]

Commodity group	1961								1960					Annual average	
	Aug.[2]	July	June	May	Apr.	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	1960[2]	1959
All commodities	119.0	118.6	118.2	118.7	119.4	119.9	120.0	119.9	119.5	119.6	119.6	119.2	119.2	119.6	119.5
Stage of processing															
Crude materials for further processing	94.9	[3]92.7	91.6	93.2	94.6	95.2	95.1	94.7	93.3	93.0	93.3	92.9	92.7	94.5	96.7
Crude foodstuffs and feedstuffs	85.2	[3]82.8	81.5	83.6	85.7	86.9	87.5	87.3	85.5	85.1	85.1	83.9	83.8	85.7	86.8
Crude nonfood materials except fuel	110.6	109.2	108.5	108.7	108.6	107.2	105.4	104.4	104.1	104.1	104.8	106.1	105.9	107.5	112.2
Crude nonfood materials, except fuel, for manufacturing	108.9	107.4	106.7	106.9	106.7	105.2	103.3	102.2	101.8	101.8	102.7	104.0	103.8	105.5	110.8
Crude nonfood materials, except fuel, for construction	142.4	142.6	142.6	142.6	142.6	142.6	142.3	142.2	142.0	142.1	142.1	142.2	142.2	142.1	140.3
Crude fuel	122.7	121.9	121.2	122.3	123.3	126.8	127.4	126.9	126.3	126.2	126.0	126.1	124.1	124.4	123.4
Crude fuel for manufacturing	122.3	121.5	120.9	121.9	122.7	126.2	126.8	126.3	125.8	125.7	125.5	125.6	123.6	123.9	122.9
Crude fuel for nonmanufacturing	123.3	122.5	121.8	123.0	124.2	127.7	128.2	127.7	127.1	127.0	126.9	127.0	124.8	125.2	124.1
Intermediate materials, supplies, and components	125.5	[3]125.6	125.8	126.3	126.9	126.9	126.7	126.7	126.4	126.5	126.6	126.8	126.8	127.0	127.0
Intermediate materials and components for manufacturing	127.1	[3]127.1	127.4	127.8	127.9	127.9	127.8	127.8	127.9	128.1	128.4	128.5	128.7	128.9	129.0
Intermediate materials for food manufacturing	101.5	101.6	102.0	103.0	103.7	103.9	103.6	102.4	101.3	101.7	100.7	100.0	99.8	99.3	98.5
Intermediate materials for nondurable manufacturing	103.8	103.6	104.1	104.5	104.8	104.8	104.8	104.9	105.2	105.5	105.9	106.2	106.5	106.4	106.4
Intermediate materials for durable manufacturing	156.4	156.2	156.0	156.0	155.6	155.4	155.4	155.5	156.6	156.7	157.2	157.7	157.8	158.1	157.9
Components for manufacturing	148.6	[3]149.1	149.5	149.6	149.7	150.0	150.1	150.0	149.3	149.5	149.8	149.8	150.0	150.7	151.5
Materials and components for construction	133.6	134.0	134.1	134.1	134.3	133.5	133.5	133.7	133.7	133.9	134.2	134.6	134.8	135.5	136.5
Processed fuels and lubricants	110.0	110.5	110.2	109.4	110.3	111.9	111.9	111.9	111.6	111.6	111.7	111.4	111.0	108.9	106.0
Processed fuels and lubricants for manufacturing	110.1	110.3	110.1	109.6	110.3	111.6	111.6	111.5	111.3	111.3	111.3	111.0	110.6	108.9	105.6
Processed fuels and lubricants for nonmanufacturing	110.1	110.9	110.6	109.1	110.4	112.5	112.5	112.7	112.3	112.3	112.4	112.1	111.8	109.1	106.8
Containers, nonreturnable	133.3	133.3	133.1	133.7	139.9	140.6	141.1	140.9	139.4	139.3	139.2	138.5	138.3	138.6	136.7
Supplies	115.6	115.8	115.9	118.3	119.2	118.7	117.6	117.8	116.1	115.2	115.1	115.4	114.8	115.8	116.6
Supplies for manufacturing	147.1	[3]147.2	147.6	147.6	148.1	149.0	148.4	148.6	149.6	149.6	149.8	149.7	149.5	149.3	143.5
Supplies for nonmanufacturing	101.4	[3]101.6	101.7	104.7	105.6	104.8	103.6	103.7	101.2	100.1	99.9	100.3	99.5	101.0	104.1
Manufactured animal feeds	68.3	68.7	69.2	74.8	72.3	70.7	68.3	68.9	64.2	61.0	60.1	61.7	59.3	63.8	74.7
Other supplies	119.5	119.4	119.2	119.5	123.5	123.4	123.4	123.2	123.0	123.1	123.2	123.0	123.1	122.9	121.3
Finished goods (goods to users, including raw foods and fuels)	121.5	121.2	120.6	120.7	121.3	122.2	122.6	122.4	122.2	122.7	122.4	121.5	121.5	121.5	120.6
Consumer finished goods	113.4	113.1	112.4	112.5	113.3	114.3	114.8	114.5	114.4	114.9	114.7	113.7	113.6	113.6	112.5
Consumer foods	107.3	[3]106.8	105.0	105.7	106.8	108.6	109.5	109.1	109.0	110.4	110.1	108.2	107.1	107.7	105.5
Consumer crude foods	95.0	[3]95.7	90.5	89.9	90.6	97.2	96.8	96.8	99.6	109.1	106.6	100.3	94.3	98.0	91.9
Consumer processed foods	109.9	109.1	108.0	108.9	110.1	111.0	112.1	111.7	111.0	110.8	110.9	110.0	109.8	109.7	108.4
Consumer other nondurable goods	114.1	113.9	113.8	113.5	114.2	115.0	115.2	114.9	114.7	114.7	114.8	114.8	114.6	114.1	113.4
Consumer durable goods	125.6	[3]125.6	125.6	125.5	125.5	125.5	125.6	125.8	125.8	125.8	125.7	123.6	126.2	126.1	126.5
Producer finished goods	153.7	[3]153.8	153.9	153.7	153.7	153.8	153.9	154.0	153.8	153.6	153.4	152.5	153.7	153.8	153.2
Producer finished goods for manufacturing	160.5	[3]160.6	160.7	160.6	160.6	160.6	160.8	160.8	160.6	160.4	160.2	159.2	160.2	160.9	158.1
Producer finished goods for nonmanufacturing	147.9	[3]147.9	147.9	147.7	147.6	147.9	147.9	148.1	147.8	147.7	147.6	146.6	148.0	148.4	149.1
Durability of product															
Total durable goods	145.2	[3]145.3	145.4	145.3	145.3	145.1	145.0	145.1	145.0	145.0	144.9	144.5	145.5	145.7	145.9
Total nondurable goods	104.7	[3]104.2	103.5	104.3	105.3	106.2	106.3	106.1	105.6	105.8	105.8	105.3	104.9	105.3	105.0
Total manufactures	125.0	124.9	124.8	125.1	125.7	126.0	126.1	126.1	125.7	125.7	125.7	125.5	125.7	125.8	125.5
Durable manufactures	146.3	[3]146.4	146.5	146.5	146.5	146.3	146.3	146.5	146.4	146.6	146.3	145.8	146.8	147.0	147.0
Nondurable manufactures	108.2	107.9	107.7	108.3	109.3	109.9	110.1	109.9	109.4	109.3	109.5	109.2	109.1	108.9	108.5
Total raw or slightly processed goods	98.7	[3]97.3	95.8	97.0	98.0	99.3	99.3	98.9	98.3	99.1	98.9	98.0	97.0	98.6	98.9
Durable raw or slightly processed goods	112.7	110.8	111.9	109.7	110.7	108.6	105.1	103.5	101.8	101.4	102.9	107.4	107.8	107.4	114.1
Nondurable raw or slightly processed goods	98.0	[3]96.6	95.0	96.3	97.4	98.8	99.0	98.6	98.1	99.0	98.7	97.4	96.3	98.1	98.1

[1] See footnote 1, table D–3.
[2] Preliminary.
[3] Revised.

NOTE: For description of the series by stage of processing, see New BLS Economic Sector Indexes of Wholesale Prices (in Monthly Labor Review, December 1958, pp. 1448–1453); and by durability of product and data beginning with 1947, see Wholesale Prices and Price Indexes, 1957, BLS Bull. 1238 (1958).

E.—Work Stoppages

TABLE E–1. Work stoppages resulting from labor-management disputes [1]

Month and year	Number of stoppages		Workers involved in stoppages		Man-days idle during month or year	
	Beginning in month or year	In effect during month	Beginning in month or year	In effect during month	Number	Percent of estimated working time
1935–39 (average)	2,862		1,130,000		16,900,000	0.27
1947–49 (average)	3,573		2,380,000		39,700,000	.46
1945	4,750		3,470,000		38,000,000	.47
1946	4,985		4,600,000		116,000,000	1.43
1947	3,693		2,170,000		34,600,000	.41
1948	3,419		1,960,000		34,100,000	.37
1949	3,606		3,030,000		50,500,000	.59
1950	4,843		2,410,000		38,800,000	.44
1951	4,737		2,220,000		22,900,000	.23
1952	5,117		3,540,000		59,100,000	.57
1953	5,091		2,400,000		28,300,000	.26
1954	3,468		1,530,000		22,600,000	.21
1955	4,320		2,650,000		28,200,000	.26
1956	3,825		1,900,000		33,100,000	.29
1957	3,673		1,390,000		16,500,000	.14
1958	3,694		2,060,000		23,900,000	.22
1959	3,708		1,880,000		69,000,000	.61
1960	3,333		1,320,000		19,100,000	.17
1960: August	361	554	134,000	221,000	1,700,000	.16
September	271	500	131,000	209,000	1,650,000	.17
October	258	432	106,000	146,000	1,500,000	.16
November	192	368	53,300	85,000	732,000	.08
December	110	250	27,500	53,200	458,000	.05
1961: January [3]	170	300	80,000	100,000	700,000	.08
February [3]	210	330	120,000	150,000	940,000	.11
March [3]	220	350	55,000	75,000	610,000	.06
April [3]	320	460	94,000	126,000	1,180,000	.14
May [3]	430	620	120,000	165,000	1,530,000	.16
June [3]	330	570	140,000	211,000	1,760,000	.18
July [3]	330	560	95,000	183,000	1,690,000	.19
August [2]	325	550	95,000	160,000	1,320,000	.13

[1] The data include all known strikes or lockouts involving 6 or more workers and lasting a full day or shift or longer. Figures on workers involved and man-days idle cover all workers made idle for as long as 1 shift in establishments directly involved in a stoppage. They do not measure the indirect or secondary effect on other establishments or industries whose employees are made idle as a result of material or service shortages.

[2] Preliminary.

[3] Revised preliminary.

F.—Work Injuries

TABLE F–1. Injury-frequency rates [1] for selected manufacturing industries

Industry	1961 [2]					1960 [2]				1959 [2]				Annual average	
	Second quarter				1st quarter	4th quarter	3d quarter	2d quarter	1st quarter	4th quarter	3d quarter	2d quarter	1st quarter	1960 [2]	1959 [2]
	Apr.	May	June	Quarter											
All manufacturing	9.8	10.5	11.0	10.5	10.4	10.4	11.9	11.1	11.1	11.1	13.4	11.7	11.2	11.3	11.9
Food and kindred products:															
Meatpacking and custom slaughtering	21.6	20.5	25.2	22.4	21.4	24.0	24.5	26.2	24.1	24.0	26.7	23.6	25.0	24.8	24.9
Sausages and other prepared meat products	21.1	35.2	26.3	27.7	29.9	26.3	28.6	29.1	25.0	24.2	27.3	26.8	23.5	27.3	25.8
Poultry and small game dressing and packing	(3)	(3)	(3)	31.8	32.1	35.8	40.8	34.0	32.5	38.3	49.3	38.7	40.0	36.7	43.9
Dairy products	16.4	11.1	17.1	14.9	15.6	15.8	15.3	20.4	17.0	15.4	18.5	17.3	16.6	16.9	17.0
Canning and preserving	16.0	17.1	21.4	18.5	18.1	19.6	23.7	18.6	18.6	17.2	25.7	17.9	19.1	20.7	20.8
Grain-mill products	16.6	16.2	15.1	15.9	15.8	16.9	17.6	14.5	13.9	16.2	20.1	19.7	18.6	15.8	18.7
Bakery products	15.5	16.2	17.2	16.3	17.4	14.1	17.9	16.8	16.4	15.2	18.3	14.9	15.4	16.3	16.0
Cane sugar	11.0	11.3	9.3	10.7	10.0	14.2	18.2	10.0	12.2	13.0	13.3	17.3	12.7	13.8	14.2
Confectionery and related products	16.1	23.2	17.9	19.1	15.2	16.1	14.5	17.3	15.7	17.5	13.4	12.7	10.5	15.8	13.7
Bottled soft drinks	21.1	25.1	26.4	24.3	21.1	21.0	25.2	21.1	21.3	18.7	26.3	23.5	19.8	22.0	22.7
Malt and malt liquors	13.4	20.9	17.3	17.2	17.8	17.9	18.1	19.0	19.0	17.5	21.9	18.2	17.2	18.5	19.1
Distilled liquors	(3)	(3)	(3)	5.3	5.7	4.2	5.0	7.6	10.5	7.1	9.3	8.7	10.5	6.7	9.3
Miscellaneous food products	11.7	15.4	14.5	13.8	14.0	12.9	18.0	13.2	13.2	15.8	18.4	15.4	14.5	14.4	16.2
Textile-mill products:															
Cotton yarn and textiles	8.1	8.0	7.2	7.8	6.8	8.0	9.2	8.2	7.9	7.5	8.6	8.4	7.7	8.4	8.0
Rayon, other synthetic, and silk textiles	7.3	8.0	7.1	7.5	5.9	8.0	7.5	7.1	7.1	8.1	8.3	8.5	7.5	7.5	8.0
Woolen and worsted textiles	17.1	15.5	18.7	17.1	14.8	13.7	19.2	18.4	16.7	15.1	19.7	19.2	17.3	17.1	17.9
Knit goods	4.8	5.6	3.8	4.7	5.9	4.2	4.9	4.8	6.0	5.7	6.2	5.9	5.9	5.0	6.0
Dyeing and finishing textiles	8.8	16.7	13.7	13.1	15.0	11.8	10.3	11.6	15.0	14.0	13.3	11.5	11.3	12.2	12.5
Miscellaneous textile goods	14.2	16.0	12.8	14.4	14.8	20.0	21.0	12.2	16.7	14.6	19.2	14.1	15.6	18.2	15.9
Apparel and other finished textile products:															
Clothing, men's and boys'	6.8	6.4	5.6	6.2	5.6	6.0	7.6	6.4	5.6	7.0	7.2	7.1	5.9	6.4	6.8
Clothing, women's and children's	4.6	4.5	5.7	4.9	5.1	4.5	6.2	5.2	5.1	4.9	5.0	4.5	5.5	5.3	5.1
Fur goods and miscellaneous apparel	5.7	7.9	4.6	6.1	5.5	7.4	7.9	4.4	7.2	7.2	5.8	7.0	7.4	6.7	6.9
Miscellaneous fabricated textile products	5.9	6.2	6.3	6.0	10.5	10.3	8.5	12.1	9.2	8.6	8.5	9.0	9.4	10.0	8.9
Lumber and wood products (except furniture):															
Logging	49.6	49.5	68.7	58.3	50.5	59.3	60.0	60.1	60.7	63.5	77.0	61.9	62.5	60.4	65.4
Sawmills and planing mills	35.0	33.8	35.2	34.7	32.9	32.9	45.2	38.9	35.9	40.3	42.4	41.3	38.6	38.4	40.9
Millwork and structural wood products	19.0	19.0	21.6	20.0	22.7	19.2	25.8	25.6	20.7	24.6	30.7	23.6	21.3	22.9	25.1
Plywood mills	21.7	23.7	28.9	24.8	22.2	23.4	23.2	22.1	19.6	24.1	23.7	25.0	25.3	22.2	24.9
Wooden containers	29.5	26.9	33.9	30.2	33.3	26.4	33.6	36.0	24.1	27.2	34.1	24.9	33.7	32.5	29.9
Miscellaneous wood products	32.3	22.6	27.9	27.6	33.3	29.4	34.8	27.3	33.5	23.8	32.8	33.5	29.7	31.8	29.9
Furniture and fixtures:															
Household furniture, nonmetal	17.0	19.1	19.1	18.3	19.0	17.8	21.8	19.2	19.2	17.9	21.2	19.2	18.5	19.6	19.2
Metal household furniture	(3)	(3)	(3)	16.2	22.7	25.4	22.3	17.8	22.1	15.4	19.9	18.5	14.8	21.6	17.0
Mattresses and bedsprings	14.5	11.7	16.6	14.3	11.5	16.0	14.2	11.3	13.3	11.2	20.1	12.4	12.6	13.4	14.0
Office furniture	16.9	13.1	13.5	14.3	12.7	10.8	16.0	15.0	13.0	11.9	20.4	18.0	15.1	13.5	16.3
Public-building and professional furniture	(3)	(3)	(3)	13.5	15.9	19.9	16.3	18.6	15.3	13.8	13.7	14.8	17.8	17.5	14.9
Partitions and fixtures	15.2	14.0	18.3	15.9	15.4	13.5	22.3	18.5	18.1	14.6	21.6	18.6	17.3	18.1	18.1
Screens, shades, and blinds	(3)	(3)	(3)	(3)	(3)	(3)	(3)	13.1	19.1	17.8	17.8	16.7	13.4	14.8	16.3
Paper and allied products:															
Pulp, paper, and paperboard mills	9.6	9.8	10.3	9.9	10.1	9.6	9.6	9.4	9.3	9.3	10.9	9.0	9.9	9.5	9.8
Paperboard containers and boxes	16.1	12.9	14.1	14.3	13.9	14.2	14.1	14.5	14.0	13.7	17.5	16.9	15.2	14.2	15.9
Miscellaneous paper and allied products	15.5	15.3	12.8	14.5	12.2	10.6	15.2	15.1	13.8	14.6	15.6	16.6	14.4	13.6	15.2
Printing, publishing, and allied industries:															
Newspapers and periodicals	8.4	8.4	8.3	8.4	8.9	9.9	11.3	9.9	9.1	8.7	10.3	9.0	9.5	10.0	9.4
Bookbinding and related products	(3)	(3)	(3)	14.6	18.5	20.2	21.2	16.1	14.6	16.2	14.2	17.3	13.4	17.5	15.2
Miscellaneous printing and publishing	11.4	9.2	11.0	10.5	10.1	12.9	11.1	10.9	11.1	9.1	12.2	9.4	10.1	11.5	10.1
Chemicals and allied products:															
Industrial inorganic chemicals	3.5	5.2	3.7	4.1	4.8	5.9	5.4	5.5	5.2	4.5	5.8	3.9	5.9	5.4	5.0
Plastics, except synthetic rubber	3.8	4.0	4.9	4.3	3.8	10.6	4.3	4.7	5.5	4.7	6.8	5.8	5.1	6.3	5.7
Synthetic rubber	(3)	(3)	(3)	1.5	1.8	1.2	1.7	1.9	.8	2.3	1.2	1.4	2.5	1.4	1.8
Synthetic fibers	(3)	(3)	(3)	3.1	3.1	3.1	2.7	1.6	3.6	2.5	2.7	2.5	1.6	2.7	2.3
Explosives	(3)	(3)	(3)	3.3	4.1	3.2	3.9	4.5	2.6	2.6	(4)	3.9	1.9	3.6	2.3
Miscellaneous industrial organic chemicals	2.8	4.1	6.2	4.3	3.7	3.1	3.7	2.6	3.1	4.3	5.0	4.5	3.9	3.1	3.5
Drugs and medicines	6.2	6.6	6.2	6.4	6.7	6.4	6.6	6.0	7.6	7.5	6.3	7.2	7.3	6.8	7.1
Soaps and related products	9.4	7.7	14.3	10.5	13.3	11.0	10.3	7.2	9.6	8.6	8.8	11.3	8.1	9.6	9.2
Paints, pigments, and related products	6.8	12.0	10.3	9.8	12.2	7.8	9.0	12.7	11.8	10.3	10.3	11.8	9.1	10.5	10.6
Fertilizers	(3)	(3)	(3)	19.1	24.4	19.1	19.9	18.6	22.6	19.7	23.4	25.9	19.3	19.7	22.2
Vegetable and animal oils and fats	17.4	20.6	18.4	18.8	21.3	19.8	21.5	21.5	22.8	21.9	22.7	21.9	24.6	21.6	22.8
Compressed and liquefied gases	(3)	(3)	(3)	6.0	12.4	10.9	10.5	9.7	11.4	7.7	10.2	10.3	8.8	10.7	9.2
Miscellaneous chemicals and allied products	14.3	14.6	12.9	13.9	13.3	13.1	14.5	13.5	13.7	13.2	14.0	13.9	14.7	13.8	14.0
Rubber products:															
Tires and inner tubes	2.8	3.4	4.0	3.4	3.2	4.4	4.0	4.0	4.1	3.9	4.6	4.0	2.8	4.1	3.9
Rubber footwear	6.9	4.9	4.2	5.2	5.8	7.4	7.3	9.0	8.3	4.7	5.0	9.0	5.9	8.0	6.1
Miscellaneous rubber products	8.7	10.5	9.1	9.5	8.3	9.1	12.5	10.6	11.5	9.7	11.4	9.6	10.0	11.0	10.2
Leather and leather products:															
Leather tanning and finishing	27.5	29.2	27.5	28.1	26.9	19.5	34.1	27.8	26.5	28.0	32.0	26.9	26.6	27.5	28.3
Boot and shoe cut stock and findings	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(4)	(3)	(3)	(3)	20.3	20.1	21.8	18.6
Footwear (except rubber)	8.8	8.7	8.3	8.6	8.8	7.6	9.4	7.9	8.8	9.2	11.4	9.8	9.4	8.5	10.0
Miscellaneous leather products	7.4	18.2	14.5	13.5	7.6	12.8	12.0	12.4	13.8	11.4	12.9	15.3	13.8	12.9	13.7
Stone, clay, and glass products:															
Glass and glass products	6.3	8.6	6.4	7.1	6.8	8.3	8.0	9.6	7.7	10.2	10.5	10.5	11.1	8.6	10.5
Structural clay products	33.4	35.2	40.4	36.4	30.5	29.8	32.8	32.5	32.8	32.0	34.8	33.3	32.5	31.8	33.4
Pottery and related products	18.9	10.3	19.6	16.2	16.1	11.7	14.2	12.4	15.7	13.2	19.3	16.4	14.3	13.4	15.9
Concrete, gypsum, and mineral wool	19.7	20.8	23.7	21.4	20.5	17.6	21.2	24.6	20.1	23.0	34.2	27.9	22.8	20.9	27.5
Miscellaneous nonmetallic mineral products	11.0	8.2	7.0	8.7	8.7	8.8	9.2	12.6	12.2	11.6	14.8	14.3	12.2	11.0	13.2

See footnotes at end of table.

TABLE F.–1. Injury-frequency rates [1] for selected manufacturing industries—Continued

Industry	1961 [2]					1960 [2]				1959 [2]				Annual average	
	Second Quarter				1st quarter	4th quarter	3d quarter	2d quarter	1st quarter	4th quarter	3d quarter	2d quarter	1st quarter	1960 [2]	1959
	Apr.	May	June	Quarter											
Primary metal industries:															
Blast furnaces and steel mills	1.9	3.2	3.1	2.6	3.3	3.2	3.6	3.6	3.7	4.1	(3)	3.9	3.9	3.6	4.2
Gray-iron and malleable foundries	19.0	22.5	25.5	22.5	24.8	22.5	25.4	24.0	25.8	24.3	28.9	27.0	25.3	24.5	26.4
Steel foundries	14.8	17.8	15.1	15.9	16.6	17.8	16.8	17.1	20.8	18.2	23.0	21.0	18.9	18.3	20.3
Nonferrous rolling, drawing, and alloying	8.5	5.8	11.6	8.8	8.4	10.5	10.1	10.0	9.4	11.3	9.3	10.8	10.4	10.0	10.4
Nonferrous foundries	21.5	21.4	17.8	20.1	19.2	18.1	18.4	18.3	19.0	20.2	18.4	17.2	18.5	18.7	18.5
Iron and steel forgings	15.9	19.4	18.2	17.9	15.6	16.2	17.7	17.6	19.5	17.5	22.0	19.0	16.2	18.0	18.6
Wire drawing	16.9	10.6	16.8	14.6	15.3	13.1	14.9	14.5	16.5	18.7	31.0	13.9	11.5	15.1	17.4
Welded and heavy-riveted pipe	6.3	10.1	14.2	10.3	9.9	8.7	8.7	10.6	10.5	11.5	(3)	7.1	8.9	9.6	9.6
Cold-finished steel	6.0	9.9	5.3	7.1	9.5	8.6	10.5	7.3	8.6	8.8	11.4	11.3	9.2	8.8	10.1
Fabricated metal products:															
Tin cans and other tinware	8.5	5.9	6.1	6.8	4.7	5.5	9.1	7.4	6.6	6.1	6.6	7.0	5.8	7.2	6.4
Cutlery and edge tools	(3)	(3)	(3)	13.9	14.3	15.2	15.1	10.1	8.6	11.9	13.7	13.1	10.1	12.4	12.1
Handtools, files, and saws	12.2	15.3	12.2	13.3	11.0	15.0	16.7	17.0	16.7	15.9	16.4	21.6	16.2	16.4	17.6
Hardware	7.7	6.2	10.5	8.1	8.7	8.7	9.3	10.0	9.5	10.1	9.5	9.3	9.1	9.3	9.5
Sanitary ware and plumbers' supplies	14.3	12.3	11.5	12.7	8.6	8.8	13.6	11.8	11.6	11.8	16.8	13.6	19.8	11.7	15.9
Oil burners, heating and cooking apparatus	11.4	12.8	11.2	11.8	15.1	11.6	17.0	12.3	14.1	14.3	18.0	15.0	15.7	13.6	15.7
Structural steel and ornamental metal work	22.4	16.3	20.1	19.6	19.6	19.0	22.4	21.3	17.1	20.2	(3)	17.5	20.6	20.2	21.3
Metal doors, sash, frame, and trim	19.2	11.0	18.8	16.3	20.5	18.1	15.0	16.5	14.0	20.6	23.2	21.2	17.2	16.2	20.6
Boiler-shop products	24.4	20.0	15.9	20.0	16.9	17.7	22.9	20.6	18.5	19.1	21.4	19.1	17.9	19.9	19.5
Sheet-metal work	15.5	18.7	19.7	18.0	22.2	17.3	19.7	22.8	24.4	21.8	24.9	27.2	21.2	21.6	23.6
Stamped and pressed metal products	8.9	9.4	10.2	9.5	9.2	9.6	11.8	9.6	11.1	10.2	11.8	12.0	9.9	10.8	11.0
Metal coating and engraving	(3)	(3)	(3)	22.7	(3)	23.8	22.5	25.6	23.4	20.2	22.8	31.0	25.6	23.5	24.4
Fabricated wire products	12.5	16.2	16.8	15.2	10.9	15.3	16.6	18.0	16.5	14.1	18.4	15.2	15.7	16.6	15.7
Metal barrels, drums, kegs, and pails	(3)	(3)	(3)	14.4	14.1	(3)	7.1	14.1	14.1	(3)	(3)	18.4	(3)	12.0	14.0
Steel springs	(3)	(3)	(3)	(3)	(3)	(3)	23.0	25.9	18.2	16.3	23.4	18.3	18.3	22.2	19.1
Bolts, nuts, washers, and rivets	13.1	8.9	16.2	12.8	10.8	13.9	13.0	12.4	15.5	12.0	13.6	13.7	12.1	13.8	12.9
Screw-machine products	7.3	7.3	6.7	7.1	11.3	11.0	13.9	11.1	12.6	9.6	16.7	15.4	11.4	12.3	13.4
Fabricated metal products, not elsewhere classified	11.1	11.2	10.9	11.1	9.1	13.4	16.9	10.3	12.4	8.8	12.4	9.9	10.0	13.8	10.4
Machinery (except electrical):															
Engines and turbines	5.5	5.4	7.5	6.1	6.0	5.7	5.9	7.0	6.9	6.2	7.5	7.2	8.0	6.5	7.3
Agricultural machinery and tractors	9.1	9.6	8.0	8.9	8.1	7.0	7.3	7.7	7.4	7.8	7.8	10.4	9.2	7.3	8.9
Construction and mining machinery	16.6	12.7	15.0	14.7	16.5	14.4	15.4	15.1	15.7	14.8	18.1	16.7	15.1	15.2	16.1
Metalworking machinery	7.9	9.9	8.7	8.9	8.1	9.0	8.7	10.4	10.3	8.7	10.0	8.7	8.4	9.6	9.0
Food-products machinery	9.1	10.9	14.9	11.6	12.5	12.0	14.9	14.8	11.4	8.2	12.6	13.3	13.6	13.0	12.5
Textile machinery	11.3	14.0	13.5	13.0	13.0	12.9	17.3	16.9	17.6	17.3	14.8	15.3	12.6	16.2	15.2
Miscellaneous special industry machinery	12.1	14.6	15.2	14.0	12.3	11.7	14.8	15.7	14.0	13.0	12.7	12.2	13.2	14.0	12.8
Pumps and compressors	8.8	10.1	9.9	9.7	10.9	13.0	13.1	12.7	14.4	10.7	13.7	11.8	13.0	13.3	12.6
Elevators, escalators, and conveyors	16.6	17.8	14.4	16.3	15.2	16.2	17.0	15.9	19.6	18.9	17.2	17.3	15.0	17.2	17.3
Mechanical power-transmission equipment (except ball and roller bearings)	6.2	11.3	11.3	9.7	11.5	11.0	10.8	12.3	12.5	11.4	12.4	11.2	9.8	11.5	11.2
Miscellaneous general industrial machinery	10.3	12.0	12.4	11.7	11.1	10.9	11.2	10.4	10.7	9.3	11.8	11.0	11.1	10.8	10.8
Commercial and household machinery	6.0	5.6	6.5	6.0	5.7	5.7	6.8	6.2	6.2	5.7	6.3	6.3	5.8	6.0	6.0
Valves and fittings	15.7	11.7	17.2	14.9	13.4	11.9	14.6	15.4	12.5	12.5	12.2	14.9	13.2	13.6	13.1
Fabricated pipe and fittings	(3)	(3)	(3)	(3)	(3)	17.3	17.9	16.9	15.7	12.8	16.3	14.9	20.0	17.2	16.1
Ball and roller bearings	6.2	8.1	4.3	6.1	5.4	5.2	4.6	5.2	5.8	4.7	5.6	5.8	5.9	5.2	5.4
Machine shops, general	10.7	13.3	13.2	12.5	13.3	12.0	13.7	12.1	13.1	13.7	15.4	15.5	15.4	13.1	15.1
Electrical machinery:															
Electrical industrial apparatus	5.0	5.5	6.0	5.5	5.6	4.8	6.0	5.0	6.0	6.1	6.8	6.8	6.2	5.5	6.5
Electrical appliances	7.2	4.0	8.4	6.5	5.4	6.7	5.0	6.5	5.9	5.4	8.6	7.8	6.8	6.0	7.2
Insulated wire and cable	7.6	21.2	14.3	14.3	16.6	17.2	15.1	14.5	9.8	9.6	13.4	15.7	10.2	14.0	12.2
Electrical equipment for vehicles	1.9	2.3	2.6	2.3	2.9	2.9	2.6	2.6	2.1	2.4	2.7	2.4	2.6	2.5	2.5
Electric lamps (bulbs)	(3)	(3)	(3)	1.2	1.6	1.9	3.2	2.0	2.9	2.0	1.6	2.2	3.7	2.4	2.3
Radios and related products	4.2	3.8	3.8	3.9	4.3	3.7	4.2	4.2	3.8	4.2	5.3	4.7	4.7	4.0	4.7
Radio tubes	.8	2.0	3.3	2.1	2.8	3.0	2.9	2.6	1.7	2.2	3.0	2.6	2.3	2.5	2.5
Miscellaneous communication equipment	2.2	2.7	2.5	2.5	2.6	1.9	3.2	2.3	2.6	2.6	2.3	1.9	2.2	2.5	2.2
Batteries	16.7	18.9	10.3	15.2	12.8	14.9	11.7	14.1	12.0	14.7	13.1	13.3	10.1	13.4	13.3
Electrical products, not elsewhere classified	(3)	(3)	(3)	6.4	2.4	4.4	11.0	3.4	9.5	3.6	5.6	5.4	4.2	7.1	4.9
Transportation equipment:															
Motor vehicles, bodies, and trailers	3.8	3.5	3.9	3.7	3.6	3.7	3.8	4.2	4.4	4.8	5.4	5.2	4.6	4.2	5.0
Motor-vehicle parts and accessories	3.4	4.0	5.0	4.1	4.8	4.2	4.0	3.9	4.9	4.9	6.0	5.7	4.7	4.5	5.4
Aircraft	2.1	2.3	2.1	2.2	2.0	1.9	2.3	2.2	2.2	2.4	2.7	2.8	2.8	2.1	2.7
Aircraft parts	4.3	4.7	4.4	4.5	4.7	3.6	5.6	3.8	4.5	4.0	4.6	3.9	3.9	4.3	4.1
Shipbuilding and repairing	14.7	12.8	15.1	14.2	11.3	13.8	15.1	15.8	16.4	15.3	16.3	17.6	16.3	15.6	16.5
Boatbuilding and repairing	(3)	(3)	(3)	(3)	(3)	26.2	36.1	18.4	26.4	28.1	27.1	31.3	28.8	26.3	28.8
Railroad equipment	5.8	7.1	8.2	7.1	6.4	6.3	8.5	7.4	7.4	6.1	6.8	7.1	7.0	7.4	6.8
Instruments and related products:															
Scientific instruments	1.3	2.1	1.6	1.6	2.3	1.9	1.6	2.6	2.7	3.5	3.9	3.6	3.0	2.2	3.5
Mechanical measuring and controlling instruments	11.0	7.0	8.7	8.9	6.0	5.7	5.8	7.1	8.6	6.4	8.6	7.1	5.7	6.9	6.9
Optical instruments and lenses	(3)	(3)	(3)	2.8	4.5	4.0	3.4	4.1	3.9	4.4	6.3	6.3	5.1	3.9	5.8
Medical instruments and supplies	5.1	8.7	10.6	8.2	8.6	8.5	9.7	5.6	7.1	10.4	10.4	7.2	8.4	7.7	9.1
Photographic equipment and supplies	3.3	5.7	4.9	4.7	5.9	5.5	5.5	4.7	6.5	5.4	6.6	6.5	5.5	5.5	6.0
Watches and clocks	(3)	(3)	(3)	4.9	3.9	5.8	5.6	6.4	3.0	4.1	4.3	5.1	3.1	5.1	4.1
Miscellaneous manufacturing:															
Paving and roofing materials	(3)	(3)	(3)	4.6	4.9	7.0	7.1	(3)	7.0	10.4	13.1	12.0	7.2	5.7	10.7
Jewelry, silverware, and plated ware	9.3	5.3	4.6	6.4	10.7	8.7	7.1	6.7	6.7	3.9	6.2	11.3	7.1	7.3	7.3
Fabricated plastics products	8.9	19.7	12.0	13.6	19.6	14.7	17.2	15.9	18.7	16.5	18.1	14.0	18.2	17.1	16.5
Miscellaneous manufacturing	10.6	12.5	13.3	12.1	12.0	12.7	13.0	12.3	12.0	12.6	14.5	13.0	12.1	12.6	13.1
Ordnance and accessories	3.3	2.4	1.5	2.4	2.5	2.5	2.5	3.7	3.3	3.2	2.9	3.0	4.3	3.0	3.3

[1] The injury-frequency rate is the average number of disabling work injuries for each million employee-hours worked. A disabling work injury is any injury occurring in the course of and arising out of employment, which (a) results in death or permanent physical impairment, or (b) makes the injured worker unable to perform the duties of any regularly established job which is open and available to him throughout the hours corresponding to his regular shift on any one or more days after the day of injury (including Sundays, days off, or plant shutdowns). The term "injury" includes occupational disease.

[2] Rates are preliminary and subject to revision when final annual data become available.

[3] Insufficient data to warrant presentation of average.

NOTE: These data are compiled in accordance with the American Standard Method of Recording and Measuring Work Injury Experience, approved by the American Standards Association, 1954.

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